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CDRL A004

Technical Report - Study/Services
Installation/Implementation Schedule Analysis

16 November 1989
Cargo Movement Operations System (CMOS)

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Prepared For

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Department of the Air Force
Standard Systems Center/AQFT
Gunter AFB, Alabama 36114

20 November 1989

Attention: Mr. Howard Stubblefield

Subject: CDRL A004, Technical Report - Study/Services
Installation/Implementation Schedule Analysis

Reference: a. Contract F11624-88-D-0002, D.O. 6K04
b. DID DI-MISC-80508


Dear Mr. Stubblefield,

In accordance with the requirements of the referenced contract
ETA Technologies submits, herewith, three copies of Technical
Analysis regarding scheduling CMOS installations worldwide.

Additional distribution of this report has been made as noted.

Respectfully yours,

ETA TECHNOLOGIES CORPORATION

for 
JOHN O'NEILL

Contract Manager

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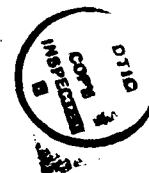
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SECTION I

1.0 INTRODUCTION. This report was initiated to develop an up-to-date baseline installation/implementation schedule upon which CMOS-related activities can be planned. It includes all known additions, deletions, and changes and discusses two separate schedules. The first is developed to depict the logistical constraints imposed by the Government, and the second set applies travel and work restrictions to determine optimal supportability.

2.0 SUMMARY. The installation and implementation schedule for CMOS should continue to be revised as conditions warrant. Factors, such as base closures, limits on fiscal year spending, equipment lead times, overseas host country requirements, and Air Force installation priorities, may force a reevaluation and adjustment of the installation schedule. Additionally, when installation begins at the ADAM-3 sites, a reevaluation and readjustment of the schedule may again be necessary.

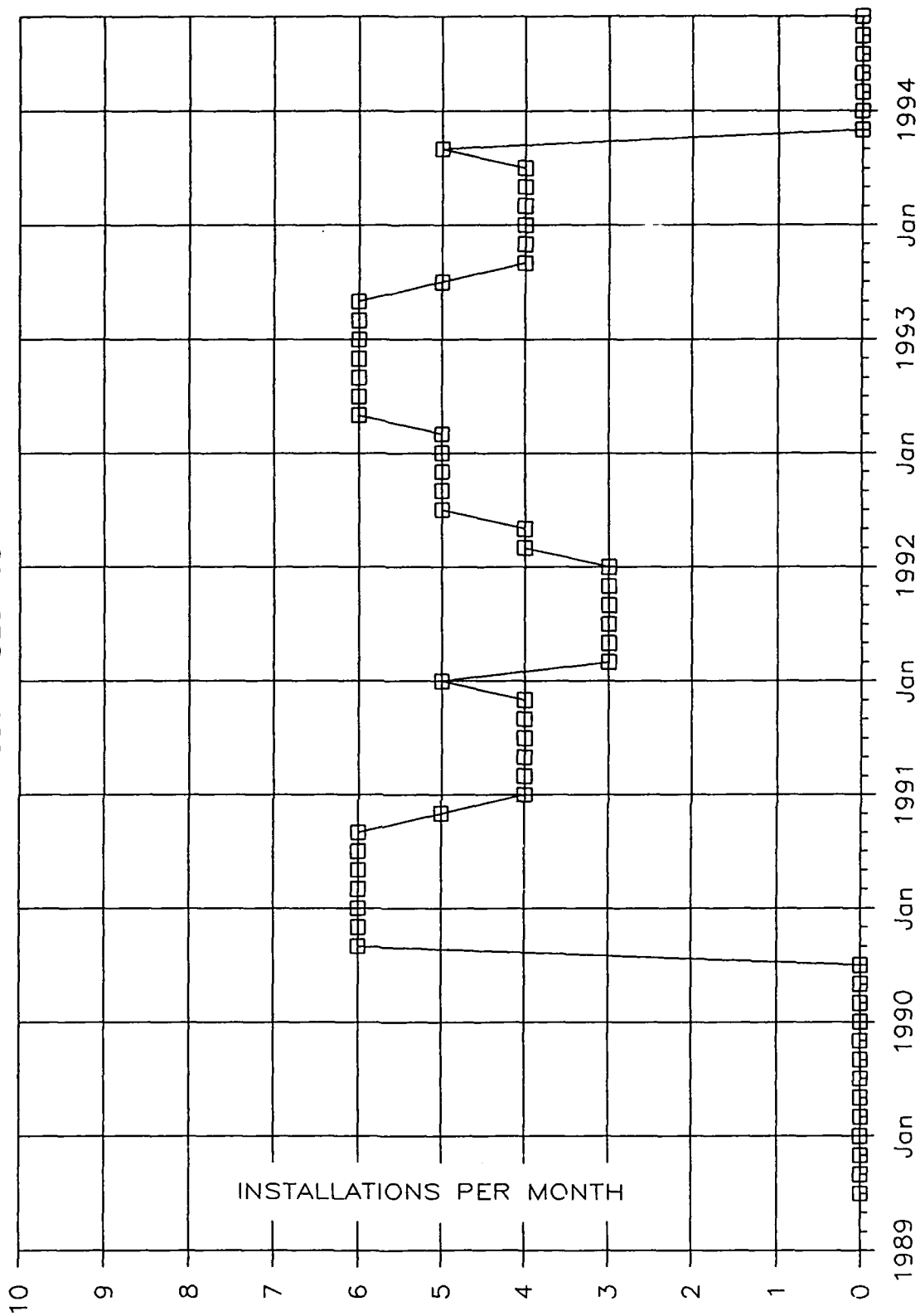
Evaluation of an installation schedule, based upon the original intent to install CMOS hardware at the rate of six per month, was determined to be unreasonable when applied across the board in both CONUS and overseas locations. Installation of CMOS hardware at a varying rate per month is considered necessary based on application of the given Air Force guidance and real world constraints. Therefore, the revised schedule reflects a rate of installation in overseas locations at four and three per month depending on the location and complexity of the sites. (See Figure 1, CMOS Installation and Implementation.)

The effect of the modified schedule, given the required constraints, extends the final installation of CMOS Increment II hardware from Nov 1993 to May 1994.

3.0 CONCLUSIONS. The proposed installation and implementation schedule represents the most current information available and complies with logistical constraints affecting supportability and scheduling. As a result, it is recommended that the schedule be approved as submitted and the Increment II ROD be extended to mid 1994. The schedule is not expected to remain etched in concrete, rather it should become a living and changing document as conditions and requirements change and evolve. For further optimization, it is recommended that the schedule be analyzed in terms of reducing travel. This would necessitate a sequence based upon location rather than parent MAJCOM. (See Section II, para 5.3.)

CMOS INSTALLATION and IMPLEMENTATION

OCT 1989 - DEC 1994



TWO INSTALLATION CREWS

CMOS Installation And Implementation
Figure 1

SECTION II

1.0 PROBLEM. Several processes critical to the successful implementation of CMOS are dependent upon a validated and accurate installation and implementation schedule.

A validated and current schedule is required so that engineering plan development, equipment ordering, installation team scheduling, and all other related support activities required to field this system can be accomplished.

Until the schedule is completed, no action can be taken to finalize dates for hardware deliveries and installation or obligate funds on the part of the Government.

2.0 ANALYSIS OF CURRENT SCHEDULE.

2.1 Current Schedule. The current schedule (used in the 4 Aug 89 Site Preparation Guide) contains bases scheduled to be closed, does not contain new sites added, and may be logistically difficult to support.

2.2 Schedule Supportability. The concept of six installations per month for both CONUS and off-shore sites is not cost effective when considering team size, travel requirements, and work restrictions such as holidays. Initial analysis of the current Increment I schedule indicated a final installation date of Oct 92 using three teams. Furthermore, this was an optimistic schedule which provided no flexibility for handling problems, rotating crews after a lengthy period overseas, or installing Increment II hardware for bases already completed with Increment I. To accommodate the additional sites and meet the original ROD, a total of four teams would be needed.

3.0 DEVELOPMENT OF REVISED SCHEDULE.

3.1 Government Constraints. Because of the size and scope of the CMOS system, there are several constraints, as well as Air Force policy guidance, which impact on the development of the installation schedule. Tables B-1 and B-2 reflect the revised schedule based upon Government constraints. The following constraints and policy guidance, not necessarily listed in order of importance, were used to formulate the schedule:

- a. Fiscal year funding.
- b. Base closures.
- c. Bases added.

- d. MAJCOM order of installation.
- e. Foreign country infrastructure limitations.
- f. Travel requirements.

3.1.1 **Fiscal Year Funding.** The current program funding available by fiscal year to field all required CMOS systems at active duty installations is as follows:

	SYSTEMS PER YEAR (active sites only)				
	FY90	FY91	FY92	FY93	FY94
Increment I	40	38	44		
Increment II	3	3	54	75	

Figure 2 - POM Funded Systems Per Year

3.1.2 **Base Closures.** Eight bases in five different MAJCOMs were identified as closing. These include:

George AFB, CA (TAC)	Florennes AB, BE (USAFE)
Pease AFB, NH (SAC)	RAF Wethersfield, UK (USAFE)
Woensdrecht AB, GE (USAFE)	Chanute AFB, IL (ATC)
Wenigerath AB, GE (USAFE)	Mather AFB, CA (ATC)

3.1.3 **Bases Added.** Six Naval Air Stations (primarily overseas) which utilize ADAM-3 at Navy-operated aerial ports were added to the schedule:

Norfolk NAS, VA	Cubi Point NAS, PI
Sigonella NAS, SP	Diego Garcia
Naples NAS, IT	Rota, SP

3.1.4 **MAJCOM Order Of Installation.** The order of installation of CMOS systems by MAJCOM was adhered to according to the guidance provided by the Air Staff.

3.1.5 **Foreign Country Infrastructure Limitations.** Installation of CMOS hardware will be more difficult and time consuming in many foreign countries due to the limited and unique communications and power distribution infrastructures. Therefore, additional consideration was given to the amount of time required to install CMOS in overseas locations.

3.1.6 **Travel Requirements.** Consideration to travel, not only between the CONUS and overseas but between countries, was applied when calculating the number of possible installations per month.

3.2 Travel And Work Constraints. Criteria based upon field experience were used in order to optimize supportability of the Government schedule. Table C-1 reflects the revised schedule after travel and work constraints were applied. These constraints are subject to change as greater experience is obtained in fielding the LAN hardware for each increment. Table C-2 shows the schedule as a Gantt chart to reflect the lead times and installation graphically.

- a. 40 hour work week unless specifically requested by the government.
- b. Holidays and weekends are not normally work days.
- c. Three days travel time required between continents.
- d. Four days travel time required between Europe and Asia.
- e. Two days travel time required between each site.
- f. Seven days required to install Increment I hardware, install Increment I software when available, and complete certification and orientation requirements.
- g. Eight days required to install Increment I at overseas sites.
- h. Three days required to install Increment II hardware and software when available.

3.2.1 Travel Considerations. Travel time allows for preparing spares, equipment, and baggage for shipment; meeting custom clearance requirements; traveling to transportation facilities; obtaining quarters at each site; and potential travel delays. It is recognized that the schedule cannot allow for every possible travel problem but must remain flexible to allow for changes.

3.2.2 Installation Considerations. Installation time allows for performing an initial on-site familiarization, unpacking and staging equipment, hardware configuration and setup, cable placement, LAN component initialization, system software installation, system administrator orientation of the hardware, and certification of the installation. It also allows an extra day at overseas locations for problem resolution and recognizes that some problems may be more difficult to resolve such as obtaining spare parts for damaged equipment or resolving unforeseen installation requirements. Again, it is recognized that actual installations may take more or less time than scheduled depending upon the nature of the site and number and severity of problems encountered. Installation time is considered sufficient for both Increment I and Increment II when installed together. However, when Increment II is installed separately, additional time is

required for team setup, familiarization, circuit testing, and LAN checkout.

3.2.3 Team Size. The revised schedule (Table C-1) is developed based upon team sizes of 3 to 4 people per team depending upon the location and size of the site. Teams will be responsible for performing many functions in order to ensure successful installation of the hardware including setup, site inspection, circuit testing, hardware configuration, and network initiation. Reduction in team size would necessitate adding additional installation time for each site.

3.3 Development Process. In developing the proposed schedule, the bases were first lined up according to the order directed by the Air Staff. Next, the bases were scheduled to provide as near as possible six installations per month within the CONUS and three to four installations at some overseas countries. Then POM funding restrictions were applied to ensure that sufficient systems could be obtained. Where necessary, the schedule was extended to provide for availability of equipment. Finally, team travel and installation requirements were applied to determine supportability.

3.3.1 Fiscal Year Funding. Available FY89 and FY90 fiscal year funding for CMOS Increment I hardware was applied to each site in the order of installation directed by the Air Staff. Sufficient funds were available to provide support for the first eleven QOT&E, Laboratory, and training sites. FY90 funds were also sufficient to equip all of TAC and SAC and two MAC bases. FY91 funds were then applied against the remainder of MAC and all but eight USAFE bases. FY92 funds were used for the remainder of USAFE as well as the rest of the MAJCOMs. Affected installation sites were scheduled accordingly.

Next, available fiscal year funding for CMOS Increment II hardware was applied following the Air Staff directed order of installation. FY90, FY91, and FY92 funds were sufficient to support the first eleven QOT&E, Laboratory, and training sites. The remainder of FY92 funds were then used to support all of TAC, SAC and MAC and most of USAFE. FY93 funds were applied against the rest of USAFE and the remainder of the Air Force. Again, affected sites were scheduled according to the availability of funds (see Tables B-1 and B-2.)

4.0 FINAL SCHEDULE (TABLE C-1).

4.1 Deviations. In order to optimize both schedule and team supportability, it was necessary to make some adjustments in the Table C-1 schedule. When compared to the Table B-1 schedule, Table C-1 meets the same end dates but allows for some slippage of intermediate dates and revised the installation sequence for

the Alaskan Air Command bases.

- a. The order of installation of Alaskan Air Command bases was adjusted to eliminate the requirement for the team to travel back and forth from Europe. Without the adjustment, the schedule would have been Elmendorf AFB, AK; Sigonella NAS, SP; Eielson AFB, AK; and Naples NAS, IT.
- b. To facilitate supportability, some bases were allowed to start a few days earlier or end a few days later than the scheduled month indicated in Table B-1.

4.2 Team Supportability. The new, revised schedule allows teams flexibility to resolve problems by building in varied lengths of preparation time. It also allows the teams to return home during the Christmas/New Year holidays. The schedule can be supported primarily with two teams, with a third team in the field from Nov 90 through Mar 92 and then again Nov 92 through May 94.

	Inc I			Inc II		
	Nov 90 - Feb 92			Feb 92 - May 94		
	90	91	92	93	94	
	ND JFMAMJJASOND			JFMAMJJASOND JFMAMJJASOND		
Team I	^ Oct 93
Team II	^ Oct 93
Team III	^ Mar 92	.....	.....	^..Nov 92.....^ May 94

Figure 3 - Team Schedule Ranges

4.3 Travel Costs. Travel costs to meet the schedule depicted in Table C-1 are shown in Table A-1. Costs shown are estimates and not intended to be a final representation of actual costs to be incurred. Factors which can alter these costs are types and costs of travel employed, number of additional trips to return to home station, team rotation after extended periods away from home, deceleration/acceleration of program, and changes in scheduled site sequence.

5.0 CONDITIONS NOT FACTORED INTO SCHEDULE.

5.1 Constraints Not Considered. There are constraints, other than those discussed above, which could affect the ability to complete hardware installation on schedule but which have not been factored into the schedule. These include sites not ready for installation on schedule and bad weather.

5.1.1 Sites Not Ready. To truly optimize the installation process, the schedule should be flexible enough to allow the installation teams to bypass any base which is not ready for

installation as scheduled. Not ready includes power not installed, communication lines not available, and DDN concentrator hookup not available. This could also include delays in delivery of required hardware or hookup of the 3B2s by AT&T.

5.1.2 Bad Weather. Bad weather is one of the most likely and yet unpredictable problems which could be encountered. Analysis of the revised schedules (both Tables B-1 and C-1) shows installations scheduled for northern bases during winter months. Particularly in the upper part of the United States and Europe, we anticipate that delays in installation will occur due to bad weather. This can affect actual installation and travel between sites. Consequently, it must be recognized that any schedule can not be guaranteed and must allow for uncontrollable delays.

5.2 Changes In Scope Or LAN Design. The schedule in Table B-1 is based upon the concept that Increment II terminals will be connected to the CMOS hosts via dial-up and dedicated telephone circuits. It also assumes that base-radio station antennae will be installed by the base. Should these concepts change, additional time will be needed to install Increment II.

5.3 Sequence Of Installation. The revised schedule was developed, for the most part, keeping in mind the Air Staff directed sequence of installation, with exception of Alaskan Air Command Bases as discussed above. Additional optimization could be gained, with a corresponding decrease in support costs, by reviewing the sequence in which bases are supported. There are several situations where bases are not supported in a logical sequence based upon location. For example, the sequence for team 2 (beginning in USAFE) of Izmir, Lajes Field, Elmendorf, Eielson, Sigonella, Naples, Rota, and Osan could be greatly optimized by a shift in sequence. The sequence of Izmir, Lajes Field, Sigonella, Naples, Rota, Elmendorf, Eielson, and Osan would reduce travel costs by an estimated \$8,800. The preparation time shown is flexible and not a factor in determining the cost unless the team is brought home during this time--in which case the costs would be slightly higher.

ANNEX A

ESTIMATED TEAM TRAVEL COSTS

The following chart (Table A-1) shows the estimated travel costs associated with installing CMOS Increment I and II hardware and software. To compute the costs, certain assumptions were made regarding costs and teams:

- a. Team sizes would be consistent for all bases.
- b. Installation times would be constant for all bases as scheduled.
- c. Overall Travel costs would average estimated one-way trip costs used:

\$ 500	CONUS/CONUS trips
2000	CONUS/EUROPE trips
2000	CONUS/PACIFIC trips
800	EUROPE/EUROPE trips
800	PACIFIC/PACIFIC trips
3000	EUROPE/PACIFIC trips

The costs reflected are intended to be a general guide to the amount of funds required to support the CMOS program over the four-year period and not intended to be actual costs. Factors which affect the accurateness of the chart include:

- a. Type of travel used.
- b. Changes in commercial travel rates.
- c. Changes in length of time TDY.
- d. Changes in schedule.

TABLE A-1

TEAM TRAVEL COSTS

INCREMENT I & II INSTALL TOGETHER

LOCATIONS	ESTIMATED COST/TRIP	TEAM SIZE	NO OF TRIPS	TRIPS CHARGED	TRAVEL COST
CONUS / CONUS Travel:	500	4	71	284	142000
CONUS / Europe Travel:	2000	4	5	20	40000
CONUS / Pacific Travel:	2000	4	3	12	24000
Europe / Europe Travel:	800	4	37	148	118400
Pacific / Pacific Travel:	800	4	10	40	32000
Europe / Pacific Travel:	3000	4	1	4	12000
Total:					368400

INCREMENT II INSTALL ONLY

LOCATIONS	ESTIMATED COST/TRIP	TEAM SIZE	NO OF TRIPS	TRIPS CHARGED	TRAVEL COST
CONUS / CONUS Travel:	500	3	55	165	82500
CONUS / Europe Travel:	2000	3	2	6	12000
CONUS / Pacific Travel:	2000	3	1	3	6000
Europe / Europe Travel:	800	3	27	81	64800
Pacific / Pacific Travel:	800	3	0	0	0
Europe / Pacific Travel:	3000	3	1	3	9000
Total:					174300

	INSTALL DAYS	TEAM SIZE	PER DIEM DAYS	EST PER DIEM	COST
Increment I & II Install:					
Team 1	507	4	2028	50	101400
Team 2	504	4	2016	50	100800
Team 3	152	4	608	50	30400
Total:	1163	4	4652	50	232600
Increment II Install Only:					
Team 1	131	3	393	50	19650
Team 2	116	3	348	50	17400
Team 3	205	3	615	50	30750
Total:	452	3	1356	50	67800
Total Costs:					
Travel:					
Increment I & II:	368400				
Increment II Only:	174300				
Total:	542700				
Per Diem:					
Increment I & II:	232600				
Increment II Only:	67800				
Total:	300400				
	=====				
Total:	843100				

ANNEX B

INSTALLATION AND EQUIPMENT DELIVERY SCHEDULES BASED UPON GOVERNMENT CONSTRAINTS

1.0 General. Tables B-1 and B-2 were developed using Government imposed constraints as discussed in Section II, para 3.0.

2.0 Table B-1. Table B-1 includes several columns of useful information:

SEQ = The sequence of the base within the MAJCOM.
BASE = Name of base.
MAJCOM = Name of Major Command.
FY = Fiscal Year in which hardware will be installed.
= Number of systems to be purchased with FY money.
EQ.DEL = Estimated date equipment would be delivered.
INSTALL = Scheduled month in which site should be installed.
ROD = Required Operational Date - Date by which system should be fully operational for the site.

3.0 Table B-2. Table B-2 reflects the number of systems to be installed per month and relates back to Figure 1, page 2.

BASE = Name of base.
MAJCOM = Name of Major Command.
0 = Install Increment I hardware only.
(-----X indicates lead time to when Inc I software will be available.)
1 = Install Increment I hardware and software.
2 = Install Increment II hardware and software.
(-----X indicates lead time to when Inc II software will be available.)
3 = Install Increment I and II hardware and Increment I software.
4 = Install Increment I and II hardware and Increment II software.

TABLE B-1

INSTALLATION / EQUIPMENT SCHEDULE

(* ADAM-3 site)		INCREMENT I						INCREMENT II					
SEQ	BASE	MAJCOM	FY	#	EQ.DEL.	INSTALL	ROD	FY	#	EQ.DEL.	INSTALL	ROD	
1	EGLIN AFB, FL	AFSC	89	1	NOV 89	NOV 89	DEC 89	92	1	DEC 91	FEB 92	MAY 92	
2	LANGLEY AFB, VA	TAC	89	2	NOV 89	APR 90	MAY 90	90	1	JUL 90	DEC 91	FEB 92	
3	SEYMOUR JOHNSON AFB, NC	TAC	89	3	NOV 89	APR 90	MAY 90	90	2	JUL 90	DEC 91	FEB 92	
4 *	DOVER AFB, DE	MAC	90	1	DEC 89	APR 90	MAY 90	91	1	DEC 90	JUN 91	FEB 92	
5	SHAW AFB, SC	TAC	89	4	NOV 89	MAY 90	AUG 90	90	3	SEP 90	DEC 91	FEB 92	
6	SCOTT AFB, IL	MAC	89	5	NOV 89	MAY 90	AUG 90	92	2	DEC 91	MAR 92	JUN 92	
7	WRIGHT PATTERSON AFB, OH	AFLC	89	6	NOV 89	MAY 90	AUG 90	92	3	DEC 91	MAR 92	JUN 92	
8 *	RAMSTEIN AB, GE	USAFE	89	7	NOV 89	JUN 90	SEP 90	91	2	DEC 90	JUN 91	FEB 92	
9 *	KADENA AB, JA	PACAF	89	8	NOV 89	JUN 90	SEP 90	91	3	DEC 90	JUN 91	FEB 92	
10	SHEPPARD TTC, TX	ATC	89	9	NOV 89	JUL 90	OCT 90	92	4	DEC 91	MAR 92	JUN 92	
11	BARKSDALE AFB, LA	SAC	89	10	NOV 89	JUL 90	OCT 90	92	5	DEC 91	MAR 92	JUN 92	
1	MYRTLE BEACH AFB, SC	TAC	90	2	JAN 90	NOV 90	FEB 91	93	1	DEC 92	MAR 93	MAR 93	
2	MOODY AFB, GA	TAC	90	3	JAN 90	NOV 90	FEB 91	93	2	DEC 92	MAR 93	MAR 93	
3	HOMESTEAD AFB, FL	TAC	90	4	JAN 90	NOV 90	FEB 91	93	3	DEC 92	MAR 93	MAR 93	
4	MACDILL AFB, FL	TAC	90	5	JAN 90	NOV 90	FEB 91	93	4	DEC 92	MAR 93	MAR 93	
5	TYNDALL AFB, FL	TAC	90	6	JAN 90	NOV 90	FEB 91	93	5	DEC 92	MAR 93	MAR 93	
6	ENGLAND AFB, LA	TAC	90	7	JAN 90	NOV 90	FEB 91	93	6	DEC 92	MAR 93	MAR 93	
7	BERGSTROM AFB, TX	TAC	90	8	MAR 90	DEC 90	FEB 91	93	7	JAN 93	APR 93	APR 93	
8	CANNON AFB, NM	TAC	90	9	MAR 90	DEC 90	FEB 91	93	8	JAN 93	APR 93	APR 93	
9	MOUNTAIN HOME AFB, ID	TAC	90	10	MAR 90	DEC 90	FEB 91	93	9	JAN 93	APR 93	APR 93	
10 *	HOWARD AB, CZ	TAC	90	11	MAR 90	DEC 90	FEB 91	93	10	JAN 93	APR 93	APR 93	
11	HOLLOMAN AFB, NM	TAC	90	12	MAR 90	DEC 90	FEB 91	93	11	JAN 93	APR 93	APR 93	
12	DAVIS MONTHAN AFB, AZ	TAC	90	13	MAR 90	DEC 90	FEB 91	93	12	JAN 93	APR 93	APR 93	
13	LUKE AFB, AZ	TAC	90	14	MAY 90	JAN 91	FEB 91	93	13	FEB 93	MAY 93	MAY 93	
14	NELLIS AFB, NV	TAC	90	15	MAY 90	JAN 91	FEB 91	93	14	FEB 93	MAY 93	MAY 93	
1	LORING AFB, ME	SAC	90	16	MAY 90	JAN 91	FEB 91	93	15	FEB 93	MAY 93	MAY 93	
2	PLATTSBURGH AFB, NY	SAC	90	17	MAY 90	JAN 91	FEB 91	93	16	FEB 93	MAY 93	MAY 93	
3	GRIFFISS AFB, NY	SAC	90	18	MAY 90	JAN 91	FEB 91	93	17	FEB 93	MAY 93	MAY 93	
4	WURTSMITH AFB, MI	SAC	90	19	MAY 90	JAN 91	FEB 91	93	18	FEB 93	MAY 93	MAY 93	
5	K.I. SAWYER AFB, MI	SAC	90	20	JUN 90	FEB 91	FEB 91	93	19	MAR 93	JUN 93	JUN 93	
6	GRISSOM AFB, IN	SAC	90	21	JUN 90	FEB 91	FEB 91	93	20	MAR 93	JUN 93	JUN 93	
7	OFFUTT AFB, NE	SAC	90	22	JUN 90	FEB 91	FEB 91	93	21	MAR 93	JUN 93	JUN 93	
8	WHITEMAN AFB, MO	SAC	90	23	JUN 90	FEB 91	FEB 91	93	22	MAR 93	JUN 93	JUN 93	
9	MCCONNELL AFB, KS	SAC	90	24	JUN 90	FEB 91	FEB 91	93	23	MAR 93	JUN 93	JUN 93	
10	EAKER AFB, AR	SAC	90	25	JUN 90	FEB 91	FEB 91	93	24	MAR 93	JUN 93	JUN 93	
11	BARKSDALE AFB, LA	SAC	90	26	JUL 90	MAR 91	MAR 91	93	25	APR 93	JUL 93	JUL 93	
12	DYESS AFB, TX	SAC	90	27	JUL 90	MAR 91	MAR 91	93	26	APR 93	JUL 93	JUL 93	
13	F.E. WARREN AFB, WY	SAC	90	28	JUL 90	MAR 91	MAR 91	93	27	APR 93	JUL 93	JUL 93	
14	MINOT AFB, ND	SAC	90	29	JUL 90	MAR 91	MAR 91	93	28	APR 93	JUL 93	JUL 93	
15	MALMSTROM AFB, MT	SAC	90	30	JUL 90	MAR 91	MAR 91	93	29	APR 93	JUL 93	JUL 93	
16	FAIRCHILD AFB, WA	SAC	90	31	JUL 90	MAR 91	MAR 91	93	30	APR 93	JUL 93	JUL 93	

TABLE B-1. Installation / Equipment Schedule, Cont....

(* ADAM-3 site)		INCREMENT I						INCREMENT II					
SEQ	BASE	MAJCOM	FY	#	EQ.DEL.	INSTALL	ROD	FY	#	EQ.DEL.	INSTALL	ROD	
17	CASTLE AFB, CA	SAC	90	32	AUG 90	APR 91	APR 91	93	31	MAY 93	AUG 93	AUG 93	
18	VANDENBERG AFB, CA	SAC	90	33	AUG 90	APR 91	APR 91	93	32	MAY 93	AUG 93	AUG 93	
19	CARSWELL AFB, TX	SAC	90	34	AUG 90	APR 91	APR 91	93	33	MAY 93	AUG 93	AUG 93	
20	ELLSWORTH AFB, SD	SAC	90	35	AUG 90	APR 91	APR 91	93	34	MAY 93	AUG 93	AUG 93	
21	GRAND FORKS AFB, ND	SAC	90	36	AUG 90	APR 91	APR 91	93	35	MAY 93	AUG 93	AUG 93	
22	BEALE AFB, CA	SAC	90	37	AUG 90	APR 91	APR 91	93	36	MAY 93	AUG 93	AUG 93	
23	MARCH AFB, CA	SAC	90	38	SEP 90	MAY 91	MAY 91	93	37	JUN 93	SEP 93	SEP 93	
1	HURLBURT FLD, FL	MAC	90	39	SEP 90	MAY 91	MAY 91	93	38	JUN 93	SEP 93	SEP 93	
2	POPE AFB, NC	MAC	90	40	SEP 90	MAY 91	MAY 91	93	39	JUN 93	SEP 93	SEP 93	
3	ANDREWS AFB, DC	MAC	91	1	DEC 90	MAY 91	MAY 91	93	40	JUN 93	SEP 93	SEP 93	
4	* MCGUIRE AFB, NJ	MAC	91	2	DEC 90	MAY 91	MAY 91	93	41	JUN 93	SEP 93	SEP 93	
5	KIRTLAND AFB, NM	MAC	91	3	DEC 90	MAY 91	MAY 91	93	42	JUN 93	SEP 93	SEP 93	
6	LITTLE ROCK AFB, AR	MAC	91	4	DEC 90	JUN 91	JUN 91	93	43	JUL 93	OCT 93	OCT 93	
7	ALTUS AFB, OK	MAC	91	5	DEC 90	JUN 91	JUN 91	93	44	JUL 93	OCT 93	OCT 93	
8	* CHARLESTON AFB, SC	MAC	91	6	DEC 90	JUN 91	JUN 91	93	45	JUL 93	OCT 93	OCT 93	
9	* TRAVIS AFB, CA	MAC	91	7	DEC 90	JUN 91	JUN 91	93	46	JUL 93	OCT 93	OCT 93	
10	* MCCHORD AFB, WA	MAC	91	8	DEC 90	JUN 91	JUN 91	93	47	JUL 93	OCT 93	OCT 93	
1	SPANGDAHLEM AB, GE	USAFE	91	9	FEB 91	JUL 91	JUL 91	93	48	AUG 93	NOV 93	NOV 93	
2	HESSISCH-OLDENDORF AS, GE	USAFE	91	10	FEB 91	JUL 91	JUL 91	93	49	AUG 93	NOV 93	NOV 93	
3	LEIPHEIM AB, GE	USAFE	91	11	FEB 91	JUL 91	JUL 91	93	50	AUG 93	NOV 93	NOV 93	
4	AHLHORN AB, GE	USAFE	91	12	FEB 91	JUL 91	JUL 91	93	51	AUG 93	NOV 93	NOV 93	
5	NORVENICH AB, GE	USAFE	91	13	FEB 91	AUG 91	AUG 91	93	52	AUG 93	DEC 93	DEC 93	
6	MORBACH AB, GE	USAFE	91	14	FEB 91	AUG 91	AUG 91	93	53	AUG 93	DEC 93	DEC 93	
7	BITBURG AB, GE	USAFE	91	15	MAR 91	AUG 91	AUG 91	93	54	SEP 93	DEC 93	DEC 93	
8	HAHN AB, GE	USAFE	91	16	MAR 91	AUG 91	AUG 91	93	55	SEP 93	DEC 93	DEC 93	
9	ZWEIBRUCKEN AB, GE	USAFE	91	17	MAR 91	SEP 91	SEP 91	93	56	SEP 93	JAN 94	JAN 94	
10	SEMBACH AB, GE	USAFE	91	18	MAR 91	SEP 91	SEP 91	93	57	SEP 93	JAN 94	JAN 94	
11	* RHEIN MAIN AB, GE	MAC	91	19	MAR 91	SEP 91	SEP 91	93	58	SEP 93	JAN 94	JAN 94	
12	TEMPLEHOF GEN ARPT, GE	USAFE	91	20	MAR 91	SEP 91	SEP 91	93	59	SEP 93	JAN 94	JAN 94	
13	RAF LAKENHEATH, UK	USAFE	91	21	APR 91	OCT 91	OCT 91	93	60	OCT 93	FEB 94	FEB 94	
14	RAF ALCONBURY, UK	USAFE	91	22	APR 91	OCT 91	OCT 91	93	61	OCT 93	FEB 94	FEB 94	
15	RAF KEMBLE, UK	AFLC	91	23	APR 91	OCT 91	OCT 91	93	62	OCT 93	FEB 94	FEB 94	
16	RAF FAIRFORD, UK	USAFE	91	24	APR 91	OCT 91	OCT 91	93	63	OCT 93	FEB 94	FEB 94	
17	RAF CHICKSANDS, UK	USAFE	91	25	APR 91	NOV 91	NOV 91	93	64	OCT 93	MAR 94	MAR 94	
18	* RAF MILDENHALL, UK	USAFE	91	26	APR 91	NOV 91	NOV 91	93	65	OCT 93	MAR 94	MAR 94	
19	RAF BENTWATERS, UK	USAFE	91	27	MAY 91	NOV 91	NOV 91	93	66	NOV 93	MAR 94	MAR 94	
20	RAF UPPER HEYFORD, UK	USAFE	91	28	MAY 91	NOV 91	NOV 91	93	67	NOV 93	MAR 94	MAR 94	
21	RAF GREENHAM COMMON, UK	USAFE	91	29	MAY 91	DEC 91	DEC 91	93	68	NOV 93	APR 94	APR 94	
22	SOESTERBERG AB, NETH	USAFE	91	30	MAY 91	DEC 91	DEC 91	93	69	NOV 93	APR 94	APR 94	
23	OSLO, NO	USAFE	91	31	MAY 91	DEC 91	DEC 91	93	70	NOV 93	APR 94	APR 94	
24	SAN VITO AS, IT	USAFE	91	32	MAY 91	DEC 91	DEC 91	93	71	NOV 93	APR 94	APR 94	
25	COMISO AS, IT	USAFE	91	33	JUN 91	JAN 92	JAN 92	93	72	DEC 93	MAY 94	MAY 94	

TABLE B-1, Installation / Equipment Schedule, Cont....

(* ADAM-3 site)		INCREMENT I						INCREMENT II					
SEQ	BASE	MAJCOM	FY	#	EQ.DEL.	INSTALL	ROD	FY	#	EQ.DEL.	INSTALL	ROD	
26	DECIMOMANNU AS, IT	USAFE	91	34	JUN 91	JAN 92	JAN 92	93	73	DEC 93	MAY 94	MAY 94	
27	AVIANO AB, IT	USAFE	91	35	JUN 91	JAN 92	JAN 92	93	74	DEC 93	MAY 94	MAY 94	
28	* HELLENIKON AB, GR	USAFE	91	36	JUN 91	JAN 92	JAN 92	93	75	DEC 93	MAY 94	MAY 94	
29	IRAKLION AS, CR	USAFE	91	37	JUN 91	JAN 92	JAN 92	93	76	DEC 93	MAY 94	MAY 94	
30	* INCIRLIK AB, TU	USAFE	92	1	DEC 91	FEB 92	FEB 92	92	12	DEC 91	FEB 92	FEB 92	
31	ANKARA AS, TU	USAFE	92	2	DEC 91	FEB 92	FEB 92	92	13	DEC 91	FEB 92	FEB 92	
32	PIRINCLIK AS, TU	USAFE	92	3	DEC 91	FEB 92	FEB 92	92	14	DEC 91	FEB 92	FEB 92	
33	IZMIR, TU	USAFE	92	4	DEC 91	MAR 92	MAR 92	92	15	DEC 91	MAR 92	MAR 92	
34	* TORREJON AB, SP	USAFE	92	5	DEC 91	MAR 92	MAR 92	92	16	DEC 91	MAR 92	MAR 92	
35	MORON AB, SP	USAFE	92	6	DEC 91	MAR 92	MAR 92	92	17	DEC 91	MAR 92	MAR 92	
36	ZARAGOZA AB, SP	USAFE	92	7	DEC 91	APR 92	APR 92	92	18	DEC 91	APR 92	APR 92	
37	* LAJES FLD, AZ	MAC	92	8	DEC 91	APR 92	APR 92	92	19	DEC 91	APR 92	APR 92	
1	* ELMENDORF AFB, AK	AAC	92	9	DEC 91	APR 92	APR 92	92	20	DEC 91	APR 92	APR 92	
2	EIELSON AFB, AK	AAC	92	10	DEC 91	JUL 92	JUL 92	92	21	DEC 91	JUL 92	JUL 92	
1	* HICKAM AFB, HI	PACAF	92	11	DEC 91	JUL 92	JUL 92	92	22	DEC 91	JUL 92	JUL 92	
2	* ANDERSEN AFB, GU	PACAF	92	12	DEC 91	JUL 92	JUL 92	92	23	DEC 91	JUL 92	JUL 92	
3	* CLARK AB, PI	PACAF	92	13	DEC 91	AUG 92	AUG 92	92	24	JAN 92	AUG 92	AUG 92	
4	* YOKOTA AB, JA	PACAF	92	14	DEC 91	AUG 92	AUG 92	92	25	JAN 92	AUG 92	AUG 92	
5	* OSAN AB, KS	PACAF	92	15	DEC 91	AUG 92	AUG 92	92	26	JAN 92	AUG 92	AUG 92	
6	KUNSAN AB, KS	PACAF	92	16	DEC 91	AUG 92	AUG 92	92	27	JAN 92	AUG 92	AUG 92	
7	MISAWA AB, JA	PACAF	92	17	DEC 91	SEP 92	SEP 92	92	28	JAN 92	SEP 92	SEP 92	
8	TAEGU AB, KS	PACAF	92	18	DEC 91	SEP 92	SEP 92	92	29	JAN 92	SEP 92	SEP 92	
9	KWANG JU AB, KS	PACAF	92	19	JAN 92	SEP 92	SEP 92	92	30	JAN 92	SEP 92	SEP 92	
10	SUWON AB, KS	PACAF	92	20	JAN 92	SEP 92	SEP 92	92	31	JAN 92	SEP 92	SEP 92	
1	HANSCOM AFB, MA	AFSC	92	21	JAN 92	OCT 92	OCT 92	92	32	JAN 92	OCT 92	OCT 92	
2	PATRICK AFB, FL	AFSC	92	22	JAN 92	OCT 92	OCT 92	92	33	JAN 92	OCT 92	OCT 92	
3	EDWARDS AFB, CA	AFSC	92	23	JAN 92	OCT 92	OCT 92	92	34	JAN 92	OCT 92	OCT 92	
4	LOS ANGELES AFS, CA	AFSC	92	24	JAN 92	OCT 92	OCT 92	92	35	JAN 92	OCT 92	OCT 92	
5	BROOKS AFB, TX	AFSC	92	25	FEB 92	OCT 92	OCT 92	92	36	FEB 92	OCT 92	OCT 92	
1	PETERSON AFB, CO	SPCMD	92	26	FEB 92	NOV 92	NOV 92	92	37	FEB 92	NOV 92	NOV 92	
1	SHEPPARD AFB, TX	ATC	92	27	FEB 92	NOV 92	NOV 92	92	38	FEB 92	NOV 92	NOV 92	
2	RANDOLPH AFB, TX	ATC	92	28	FEB 92	NOV 92	NOV 92	92	39	FEB 92	NOV 92	NOV 92	
3	COLUMBUS AFB, OH	ATC	92	29	FEB 92	NOV 92	NOV 92	92	40	FEB 92	NOV 92	NOV 92	
4	WILLIAMS AFB, AZ	ATC	92	30	FEB 92	NOV 92	NOV 92	92	41	FEB 92	NOV 92	NOV 92	
5	REESE AFB, TX	ATC	92	31	MAR 92	DEC 92	DEC 92	92	42	MAR 92	DEC 92	DEC 92	
6	VANCE AFB, OK	ATC	92	32	MAR 92	DEC 92	DEC 92	92	43	MAR 92	DEC 92	DEC 92	
7	GOODFELLOW AFB, TX	ATC	92	33	MAR 92	DEC 92	DEC 92	92	44	MAR 92	DEC 92	DEC 92	
8	KEESLER AFB, MS	ATC	92	34	MAR 92	DEC 92	DEC 92	92	45	MAR 92	DEC 92	DEC 92	
9	LACKLAND AFB, TX	ATC	92	35	MAR 92	DEC 92	DEC 92	92	46	MAR 92	DEC 92	DEC 92	

TABLE B-1, Installation / Equipment Schedule, Cont....

(* ADAM-3 site)		INCREMENT I					INCREMENT II				
SEQ	BASE	MAJCOM	FY #	EQ.DEL.	INSTALL	ROD	FY #	EQ.DEL.	INSTALL	ROD	
10	LOWRY AFB, CO	ATC	92 36	MAR 92	JAN 93	JAN 93	92 47	MAR 92	JAN 93	JAN 93	
11	LAUGHLIN AFB, TX	ATC	92 37	APR 92	JAN 93	JAN 93	92 48	APR 92	JAN 93	JAN 93	
1	HQ USAF ACADEMY, CO	AFA	92 38	APR 92	JAN 93	JAN 93	92 49	APR 92	JAN 93	JAN 93	
1	MAXWELL AFB, AL	AU	92 39	APR 92	JAN 93	JAN 93	92 50	APR 92	JAN 93	JAN 93	
1	MCCLELLAN AFB, CA	AFLC	92 40	APR 92	JAN 93	JAN 93	92 51	APR 92	JAN 93	JAN 93	
2	ROBINS AFB, GA	AFLC	92 41	APR 92	FEB 93	FEB 93	92 52	APR 92	FEB 93	FEB 93	
3	TINKER AFB, OK	AFLC	92 42	APR 92	FEB 93	FEB 93	92 53	DEC 91	FEB 93	FEB 93	
4	KELLY AFB, TX	AFLC	92 43	MAY 92	FEB 93	FEB 93	92 54	DEC 91	FEB 93	FEB 93	
5	NEWARK AFB, OH	AFLC	92 44	MAY 92	FEB 93	FEB 93	92 55	DEC 91	FEB 93	FEB 93	
6	HILL AFB, UT	AFLC	92 45	MAY 92	FEB 93	FEB 93	92 56	DEC 91	FEB 93	FEB 93	
1	NORFOLK NAS, VA	NAVY	92 46	DEC 91	MAY 92	MAY 92	92 6	DEC 91	MAY 92	MAY 92	
2	SIGONELLA NAS, SP	NAVY	92 47	DEC 91	MAY 92	MAY 92	92 7	DEC 91	MAY 92	MAY 92	
3	NAPLES NAS, IT	NAVY	92 48	DEC 91	MAY 92	MAY 92	92 8	DEC 91	MAY 92	MAY 92	
4	CUBI POINT NAS, PI	NAVY	92 49	DEC 91	JUN 92	JUN 92	92 9	DEC 91	JUN 92	JUN 92	
5	DIEGO GARCIA	NAVY	92 50	DEC 91	JUN 92	JUN 92	92 10	DEC 91	JUN 92	JUN 92	
6	ROTA, SP	NAVY	92 51	DEC 91	JUN 92	JUN 92	92 11	DEC 91	JUN 92	JUN 92	

TABLE B-2

CMOS INSTALLATION/IMPLEMENTATION SCHEDULE

(* ADAM-3 site)		1989	1990	1991	1992	1993	1994
BASE	MAJCOM	OND	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
EGLIN AFB, FL	AFSC	0	0-----X				
LANGLEY AFB, VA	TAC		0-----X		2-----X		
SEYMOUR JOHNSON AFB, TAC			0-----X		2-----X		
* DOVER AFB, DE	MAC		0-----X	2-----X			
SHAW AFB, SC	TAC		0-----X		2-----X		
SCOTT AFB, IL	MAC		0-----X		2-----X		
WRIGHT PATTERSON AFB, FL			0-----X		2-----X		
* RAMSTEIN AB, GE	USAFE		0-----X	2-----X			
* KADENA AB, JA	PACAF		0-----X	2-----X			
SHEPPARD TTC, TX	ATC		0-----X		2-----X		
BARKSDALE AFB, LA	SAC		0-----X		2-----X		
MYRTLE BEACH AFB, SCTAC			0-----X			2	
MOODY AFB, GA	TAC		0-----X			2	
HOMESTEAD AFB, FL	TAC		0-----X			2	
MACDILL AFB, FL	TAC		0-----X			2	
TYNDALL AFB, FL	TAC		0-----X			2	
ENGLAND AFB, LA	TAC		0-----X			2	
BERGSTROM AFB, TX	TAC		0-----X			2	
CANNON AFB, NM	TAC		0-----X			2	
MOUNTAIN HOME AFB, ITAC			0-----X			2	
* HOWARD AB, CZ	TAC		0-----X			2	
HOLLOWAY AFB, NM	TAC		0-----X			2	
DAVIS MONTHAN AFB, ATAC			0-----X			2	
LUKE AFB, AZ	TAC		0-----X			2	
NELLIS AFB, NV	TAC		0-----X			2	
LORING AFB, ME	SAC		0-----X			2	
PLATTSBURGH AFB, NY	SAC		0-----X			2	
GRIFFISS AFB, NY	SAC		0-----X			2	
Wurtsmith AFB, MI	SAC		0-----X			2	
K.I. SAWYER AFB, MI	SAC		1			2	
		OND	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
		1989	1990	1991	1992	1993	1994

TABLE B-2, CHOS Installation/Implementation Schedule, Cont....

(* ADAM-3 site)		1989	1990	1991	1992	1993	1994
BASE	MAJCOM	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D
GRISOM AFB, IN	SAC		1			2	
OFFUTT AFB, NE	SAC		1			2	
WHITEMAN AFB, MO	SAC		1			2	
MCCONNELL AFB, KS	SAC		1			2	
EAKER AFB, AR	SAC		1			2	
BARKSDALE AFB, LA	SAC		1			2	
DYESS AFB, TX	SAC		1			2	
F.E. WARREN AFB, WY	SAC		1			2	
MINOT AFB, ND	SAC		1			2	
MAHMSTROM AFB, MT	SAC		1			2	
FAIRCHILD AFB, WA	SAC		1			2	
CASTLE AFB, CA	SAC		1			2	
VANDENBERG AFB, CA	SAC		1			2	
CARSWELL AFB, TX	SAC		1			2	
ELLSWORTH AFB, SD	SAC		1			2	
GRAND FORKS AFB, ND	SAC		1			2	
BEALE AFB, CA	SAC		1			2	
MARCH AFB, CA	SAC		1			2	
HURLBURT FLD, FL	MAC		1			2	
POPE AFB, NC	MAC		1			2	
ANDREWS AFB, DC	MAC		1			2	
* MCGUIRE AFB, NJ	MAC		1			2	
KIRTLAND AFB, NM	MAC		1			2	
LITTLE ROCK AFB, AR	MAC		1			2	
ALTUS AFB, OK	MAC		1			2	
* CHARLESTON AFB, SC	MAC		1			2	
* TRAVIS AFB, CA	MAC		1			2	
* MCCORD AFB, WA	MAC		1			2	
SPANGDAHLEN AB, GE	USAFE		1			2	
HESSISCH-OLDENDORF	AUSAFE		1			2	

		O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D	O N D J F M A M J J A S O N D
		1989	1990	1991	1992	1993	1994

TABLE B-2. CMOs Installation/Implementation Schedule, Cont....

(* ADAM-3 site)		1989	1990	1991	1992	1993	1994
BASE	MAJCOM	O N D J J F M A M J J A S O N D	O N D J J F M A M J J A S O N D	O N D J J F M A M J J A S O N D	O N D J J F M A M J J A S O N D	O N D J J F M A M J J A S O N D	O N D J J F M A M J J A S O N D
LEIPHEIM AB, GE	USAFE			1			2
AHLHORN AB, GE	USAFE			1			2
NORVENICH AB, GE	USAFE			1			2
MORBACH AB, GE	USAFE			1			2
BITBURG AB, GE	USAFE			1			2
HAHN AB, GE	USAFE			1			2
ZWEIBRUCKEN AB, GE	USAFE			1			2
SENBACH AB, GE	USAFE			1			2
* RHEIN MAIN AB, GE	MAC			1			2
TEMPLEHOF GEN ARPT, USAF				1			2
RAF LAKENHEATH, UK	USAFE			1			2
RAF ALCONBURY, UK	USAFE			1			2
RAF KEMBLE, UK	AFLC			1			2
RAF FAIRFORD, UK	USAFE			1			2
RAF CHICKSANDS, UK	USAFE			1			2
* RAF MILDENHALL, UK	USAFE			1			2
RAF BENTWATERS, UK	USAFE			1			2
RAF UPPER HEYFORD, U.S.A.F.				1			2
RAF GREENHAM COMMON, USAF				1			2
SOESTERBERG AB, NETUSAFE				1			2
OSLO, NO	USAFE			1			2
SAN VITO AS, IT	USAFE			1			2
COMISO AS, IT	USAFE			1			2
DECIMOMANNU AS, IT	USAFE			1			2
AVIANO AB, IT	USAFE			1			2
* HELLENIKON AB, GR	USAFE			1			2
IRAKLION AS, CR	USAFE			1			2
* INCIRLIK AB, TU	USAFE			1			2
ANKARA AS, TU	USAFE			3			3
PIRINCLIK AS, TU	USAFE			3			3

TABLE B-2. CWS Installation/Implementation Schedule, Cont....

(* ADAM-3 site)		1989	1990	1991	1992	1993	1994
BASE	MAJCOM	OND	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
IZMIR, TU	USAFE						
* TORREJON AB, SP	USAFE				3		
MORON AB, SP	USAFE				3		
ZARAGOZA AB, SP	USAFE				3		
* LAJES FLD, AZ	MAC				3		
* ELMENDORF AFB, AK	AAC				3		
EIELSON AFB, AK	AAC				4		
* HICKAM AFB, HI	PACAF				4		
* ANDERSEN AFB, GU	PACAF				4		
* CLARK AB, PI	PACAF				4		
* YOKOTA AB, JA	PACAF				4		
* OSAN AB, KS	PACAF				4		
KUNSAN AB, KS	PACAF				4		
MISAWA AB, JA	PACAF				4		
TAEGU AB, KS	PACAF				4		
KWANG JU AB, KS	PACAF				4		
SUNOM AB, KS	PACAF				4		
HANSCOM AFB, MA	AFSC				4		
PATRICK AFB, FL	AFSC				4		
EDWARDS AFB, CA	AFSC				4		
LOS ANGELES AFS, CA	AFSC				4		
BROOKS AFB, TX	AFSC				4		
PETERSON AFB, CO	SPCMD				4		
SHEPPARD AFB, TX	ATC				4		
RANDOLPH AFB, TX	ATC				4		
COLUMBUS AFB, OH	ATC				4		
WILLIAMS AFB, AZ	ATC				4		
REESE AFB, TX	ATC				4		
VANCE AFB, OK	ATC				4		
GOODFELLOW AFB, TX	ATC				4		

OND J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

ANNEX C

TEAM INSTALLATION SCHEDULES BASED UPON TRAVEL CONSTRAINTS

1.0 General. Tables C-1 and C-2 were developed using the team travel constraints discussed in Section II, para 3.2. The constraints included allowance for holidays and weekends off, two days travel between sites in the same country, three days travel between countries, and four days travel between Europe and Asia. The tables were developed under major headings of teams 1, 2, and 3 in order to accurately reflect how many and when each base could be installed. The lists of bases under each team were leveled to ensure that all sites could be supported as close as possible to the time schedule required by Table B-1. Slack time was noted as "Preparation Time."

2.0 Table C-1. Table C-1 is a partial representation of the fields available using SuperProject Expert. The selected fields are:

- Heading/Task = Name of each task (base).
- Resource = This would be manpower applied.
- Task ID = A number automatically generated.
- Duration of Major Task = Total number of calendar days from start of first sub task to finish of last sub task.
- Duration of Sub Task = Total number of actual work days from start of individual task to finish of individual task.
- Scheduled Start Day = Date task should begin.
- Scheduled Finish Day = Date task should finish.
- Status = Depicts status whether on schedule or overdue, critical, etc.

3.0 Table C-2. Table C-2 is a Gantt chart representation of the schedule in Table C-1. It provides a graphical representation of the task duration times, slack times, lead times between installations, and major category times. The following legend depicts the symbols used in the Gantt chart:

TABLE C-1

CMOS INSTALLATION SCHEDULE

Outline
11-03-89 13:50

Project: CMOSTEAM.PJ
Revision: 3

Heading/Task	Resource	Task ID	Dur	Schd Start	Schd Finish	Status
CMOSTEAM.PJ		P1	900	11-01-90<	06-01-94	
Team 1		017	744	11-01-90	10-15-93	Scheduled
TAC - Inc I		015	48	11-01-90	01-11-91	Scheduled
MyrtleBeachAFBSC		001	7	11-01-90	11-12-90	Scheduled
MacDill AFB, FL		004	7	11-15-90	11-26-90	Scheduled
Bergstrom AFB, TX		008	7	11-29-90	12-07-90	Scheduled
Howard AFB, CZ		007	7	12-12-90	12-20-90	Scheduled
Preparation Time		199	3	12-26-90	12-28-90	Scheduled
Luke AFB, AZ		014	7	01-03-91	01-11-91	Scheduled
SAC - Inc I		042	79	01-16-91	05-08-91	Scheduled
PlattsburgAFB, NY		037	7	01-16-91	01-24-91	Scheduled
KISawyer AFB, MI		041	7	01-29-91	02-06-91	Scheduled
Whiteman AFB, MO		024	7	02-11-91	02-20-91	Scheduled
Barksdale AFB, LA		021	7	02-26-91	03-06-91	Scheduled
Minot AFB, ND		026	7	03-11-91	03-19-91	Scheduled
Preparation Time		200	7	03-22-91	04-01-91	Scheduled
Castle AFB, CA		032	7	04-04-91	04-12-91	Scheduled
Ellsworth AFB, SD		027	7	04-17-91	04-25-91	Scheduled
March AFB, CA		035	7	04-30-91	05-08-91	Scheduled
MAC - Inc I		043	35	05-13-91	07-01-91	Scheduled
Andrews AFB, MD		046	7	05-13-91	05-21-91	Scheduled
Preparation Time		204	8	05-24-91	06-05-91	Scheduled
LittleRockAFB, AR		047	7	06-10-91	06-18-91	Scheduled
Travis AFB, CA		052	7	06-21-91	07-01-91	Scheduled
USAFE - Inc I		077	145	07-08-91	02-04-92	Scheduled
SpangdahlemAB, GE		054	8	07-08-91	07-17-91	Scheduled
Hessisch-O AB, GE		055	8	07-22-91	07-31-91	Scheduled
Bitburg AB, GE		059	8	08-05-91	08-14-91	Scheduled
Hahn AB, GE		060	8	08-19-91	08-28-91	Scheduled
ZweibruckenAB, GE		166	8	09-03-91	09-12-91	Scheduled
Sembach AB, GE		160	8	09-17-91	09-26-91	Scheduled
RAF Alconbury, UK		072	8	10-01-91	10-11-91	Scheduled
RAF Kemble, (AFLC		076	8	10-16-91	10-25-91	Scheduled
RAF Fairford, UK		073	8	10-30-91	11-11-91	Scheduled
RAF Up Heyford, U		168	8	11-14-91	11-26-91	Scheduled
RAF GreenhamComU		169	8	11-29-91	12-10-91	Scheduled
Sostesterburg, Ne		061	8	12-13-91	12-24-91	Scheduled
Preparation Time		206	5	12-30-91	01-06-92	Scheduled
Comiso AS, Italy		064	8	01-09-92	01-21-92	Scheduled
Iraklion AS, Cre		066	8	01-24-92	02-04-92	Scheduled

TABLE C-1, CMOS Installation Schedule, Cont...

Outline
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Project: CMOSTEAM.PJ
Revision: 3

Heading/Task	Resource	Task ID	Dur	Schd Start	Schd Finish	Status
USAFE - Inc I/II		458	49	02-07-92	04-16-92	Scheduled
Incirlik AB, Tur		067	8	02-07-92	02-18-92	Scheduled
Ankara AB, Turke		068	8	02-24-92	03-04-92	Scheduled
Torrejon AB, Spa		069	8	03-10-92	03-19-92	Scheduled
Moron AB, Spain		070	8	03-24-92	04-02-92	Scheduled
Zaragoza AB, Spa		165	8	04-07-92	04-16-92	Scheduled
Navy - Inc I/II		188	51	04-21-92	07-01-92	Scheduled
Preparation Time		208	20	04-21-92	05-18-92	Scheduled
Norfolk NAS, VA		190	7	05-21-92	06-01-92	Scheduled
Cubi Pt NAS, PI		193	8	06-08-92	06-17-92	Scheduled
Diego Garcia		194	8	06-22-92	07-01-92	Scheduled
PACAF - Inc I/II		093	55	07-06-92	09-21-92	Scheduled
Preparation Time		209	5	07-06-92	07-10-92	Scheduled
Hickam AFB, HI		082	8	07-15-92	07-24-92	Scheduled
Andersen AFB, GU		091	8	07-29-92	08-07-92	Scheduled
Clark AB, PI		085	8	08-12-92	08-21-92	Scheduled
Yokota AB, JA		083	8	08-26-92	09-07-92	Scheduled
Misawa AB, JA		084	8	09-10-92	09-21-92	Scheduled
AFSC - Inc I/II		099	25	09-25-92	10-30-92	Scheduled
Hanscom AFB, MA		094	7	09-25-92	10-05-92	Scheduled
Patrick AFB, FL		095	7	10-09-92	10-19-92	Scheduled
Edwards AFB, CA		096	7	10-22-92	10-30-92	Scheduled
ATC - Inc I/II		102	50	11-04-92	01-19-93	Scheduled
Columbus AFB, MS		105	7	11-04-92	11-12-92	Scheduled
Williams AFB, AZ		106	7	11-18-92	11-27-92	Scheduled
Vance AFB, OK		108	7	12-02-92	12-10-92	Scheduled
Keesler AFB, MS		110	7	12-15-92	12-23-92	Scheduled
Preparation Time		212	5	12-29-92	01-05-93	Scheduled
Lowry AFB, CO		112	7	01-08-93	01-19-93	Scheduled
Academy-Inc I/II		187	7	01-22-93	02-01-93	Scheduled
AF Academy, CO		114	7	01-22-93	02-01-93	Scheduled
AFLC - Inc I/II		115	16	02-04-93	02-26-93	Scheduled
McClellan AFB, CA		116	7	02-04-93	02-12-93	Scheduled
Hill AFB, UT		120	7	02-17-93	02-26-93	Scheduled
TAC - Inc II		415	47	03-03-93	05-06-93	Scheduled
MyrtleBeachAFBSC		219	3	03-03-93	03-05-93	Scheduled
Homestead AFB, FL		221	3	03-10-93	03-12-93	Scheduled
Tyndall AFB, FL		223	3	03-17-93	03-19-93	Scheduled
Preparation Time		460	5	03-24-93	03-30-93	Scheduled
Bergstrom AFB, TX		226	3	04-02-93	04-06-93	Scheduled
MountainHoAFB, ID		228	3	04-09-93	04-13-93	Scheduled

TABLE C-1, CMOS Installation Schedule, Cont...

Outline
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Project: CMOSTEAM.PJ
Revision: 3

Heading/Task	Resource	Task ID	Dur	Schd Start	Schd Finish	Status
Holloman AFB, NM		229	3	04-16-93	04-20-93	Scheduled
Preparation Time		461	5	04-23-93	04-29-93	Scheduled
Luke AFB, AZ		232	3	05-04-93	05-06-93	Scheduled
SAC - Inc II		416	86	05-11-93	09-09-93	Scheduled
Loring AFB, ME		254	3	05-11-93	05-13-93	Scheduled
Griffiss AFB, NY		256	3	05-18-93	05-20-93	Scheduled
Preparation Time		462	5	05-25-93	06-01-93	Scheduled
KISawyer AFB, MI		259	3	06-04-93	06-08-93	Scheduled
Offutt AFB, NE		237	3	06-11-93	06-15-93	Scheduled
McConnell AFB, KS		241	3	06-18-93	06-22-93	Scheduled
Preparation Time		463	5	06-25-93	07-01-93	Scheduled
Barksdale AFB, LA		239	3	07-06-93	07-08-93	Scheduled
FEWarren AFB, WY		247	3	07-13-93	07-15-93	Scheduled
Malmstrom AFB, MT		248	3	07-20-93	07-22-93	Scheduled
Preparation Time		464	5	07-27-93	08-02-93	Scheduled
Castle AFB, CA		250	3	08-05-93	08-09-93	Scheduled
Carswell AFB, TX		238	3	08-12-93	08-16-93	Scheduled
GrandForks AFB, ND		246	3	08-19-93	08-23-93	Scheduled
Preparation Time		465	5	08-26-93	09-01-93	Scheduled
March AFB, CA		253	3	09-07-93	09-09-93	Scheduled
MAC - Inc II		421	23	09-14-93	10-15-93	Scheduled
Hurlburt Fld, FL		262	3	09-14-93	09-16-93	Scheduled
Andrews AFB, MD		264	3	09-21-93	09-23-93	Scheduled
Kirtland AFB, NM		266	3	09-28-93	09-30-93	Scheduled
Altus AFB, OK		267	3	10-05-93	10-07-93	Scheduled
Travis AFB, CA		270	3	10-13-93	10-15-93	Scheduled
Team 2		018	747	11-01-90	10-20-93	Scheduled
TAC - Inc I		124	48	11-01-90	01-11-91	Scheduled
Moody AFB, GA		002	7	11-01-90	11-12-90	Scheduled
Tyndall AFB, FL		005	7	11-15-90	11-26-90	Scheduled
Cannon AFB, NM		009	7	11-29-90	12-07-90	Scheduled
Holloman AFB, NM		011	7	12-12-90	12-20-90	Scheduled
Preparation Time		201	3	12-26-90	12-28-90	Scheduled
Nellis AFB, NV		013	7	01-03-91	01-11-91	Scheduled
SAC - Inc I		123	70	01-16-91	04-25-91	Scheduled
Griffiss AFB, NY		038	7	01-16-91	01-24-91	Scheduled
Grissom AFB, IN		039	7	01-29-91	02-06-91	Scheduled
McConnell AFB, KS		023	7	02-11-91	02-20-91	Scheduled
Dyess AFB, TX		025	7	02-26-91	03-06-91	Scheduled
Malmstrom AFB, MT		030	7	03-11-91	03-19-91	Scheduled
Preparation Time		202	7	03-22-91	04-01-91	Scheduled

TABLE C-1, CMOS Installation Schedule, Cont...

Outline
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Project: CMOSTEAM.PJ
Revision: 3

Heading/Task	Resource	Task ID	Dur	Schd Start	Schd Finish	Status
VandenbergAFB, CA		033	7	04-04-91	04-12-91	Scheduled
GrandForksAFB, ND		028	7	04-17-91	04-25-91	Scheduled
MAC - Inc I		125	44	04-30-91	07-01-91	Scheduled
Hurlburt Fld, FL		044	7	04-30-91	05-08-91	Scheduled
McGuire AFB, NJ		053	7	05-13-91	05-21-91	Scheduled
Preparation Time		205	8	05-24-91	06-05-91	Scheduled
Altus AFB, OK		049	7	06-10-91	06-18-91	Scheduled
McChord AFB, WA		051	7	06-21-91	07-01-91	Scheduled
USAFE - Inc I		126	146	07-08-91	02-05-92	Scheduled
Ahlhorn AB, GE		057	8	07-08-91	07-17-91	Scheduled
Leipheim AB, GE		056	8	07-22-91	07-31-91	Scheduled
Norvenich AB, GE		058	8	08-05-91	08-14-91	Scheduled
Morbach AB, GE		078	8	08-19-91	08-28-91	Scheduled
RheinMain (MAC)		170	8	09-03-91	09-12-91	Scheduled
Templehof (MAC)		171	8	09-17-91	09-26-91	Scheduled
RAF Lakenheath, U		071	8	10-01-91	10-11-91	Scheduled
RAF ChicksandsUK		074	8	10-16-91	10-25-91	Scheduled
RAF Mildenhall, U		075	8	10-30-91	11-11-91	Scheduled
RAF Bentwaters, U		167	8	11-14-91	11-26-91	Scheduled
Oslo, No		062	8	11-29-91	12-10-91	Scheduled
San Vito AS, Ita		063	8	12-16-91	12-26-91	Scheduled
Preparation Time		207	5	12-31-91	01-07-92	Scheduled
DecimomannuAB, It		161	8	01-10-92	01-22-92	Scheduled
Aviano AB, Italy		162	8	01-27-92	02-05-92	Scheduled
USAFE - Inc I/II		459	39	02-10-92	04-03-92	Scheduled
Hellenikon AB, Gr		065	8	02-10-92	02-19-92	Scheduled
Pirinclik AB, Tu		163	8	02-25-92	03-05-92	Scheduled
Izmir AB, Turkey		164	8	03-10-92	03-19-92	Scheduled
Lajes Field, Azo		079	8	03-25-92	04-03-92	Scheduled
AAC - Inc I/II		092	18	04-10-92	05-05-92	Scheduled
Elmendorf AFB, A		080	8	04-10-92	04-21-92	Scheduled
Eielson AFB, AK		081	8	04-24-92	05-05-92	Scheduled
Navy - Inc I/II		189	28	05-12-92	06-19-92	Scheduled
Sigonella NAS, SP		191	8	05-12-92	05-21-92	Scheduled
Naples NAS, It		192	8	05-26-92	06-05-92	Scheduled
Rota, SP		195	8	06-10-92	06-19-92	Scheduled
PACAF - Inc I/II		128	70	06-24-92	09-30-92	Scheduled
Preparation Time		211	20	06-24-92	07-21-92	Scheduled
Osan AB, ROK		086	8	07-24-92	08-04-92	Scheduled
Kunsan AB, ROK		087	8	08-07-92	08-18-92	Scheduled
Taegu AB, ROK		088	8	08-21-92	09-01-92	Scheduled

TABLE C-1, CMOS Installation Schedule, Cont...

Outline
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Project: CMOSTEAM.PJ
Revision: 3

Heading/Task	Resource	Task ID	Dur	Schd Start	Schd Finish	Status
Kwang-Ju AB, ROK		089	8	09-07-92	09-16-92	Scheduled
Suwon AB, ROK		090	8	09-21-92	09-30-92	Scheduled
AFSC - Inc I/II		215	16	10-06-92	10-28-92	Scheduled
Los Angeles AFS		097	7	10-06-92	10-15-92	Scheduled
Brooks AFB, TX		098	7	10-20-92	10-28-92	Scheduled
SPACOM -Inc I/II		101	7	11-02-92	11-10-92	Scheduled
Peterson AFB, CO		100	7	11-02-92	11-10-92	Scheduled
ATC - Inc I/II		130	42	11-16-92	01-15-93	Scheduled
Sheppard AFB, TX		104	7	11-16-92	11-24-92	Scheduled
Randolph AFB, TX		103	7	11-30-92	12-08-92	Scheduled
Reese AFB, TX		107	7	12-11-92	12-21-92	Scheduled
Preparation Time		213	6	12-24-92	01-04-93	Scheduled
Laughlin AFB, TX		113	7	01-07-93	01-15-93	Scheduled
AFLC - Inc I/II		131	25	01-21-93	02-25-93	Scheduled
Robins AFB, GA		117	7	01-21-93	01-29-93	Scheduled
Tinker AFB, OK		118	7	02-03-93	02-11-93	Scheduled
Newark AFB, OH		127	7	02-16-93	02-25-93	Scheduled
TAC - Inc II		455	47	03-02-93	05-05-93	Scheduled
Moody AFB, GA		220	3	03-02-93	03-04-93	Scheduled
MacDill AFB, FL		222	3	03-09-93	03-11-93	Scheduled
England AFB, LA		224	3	03-16-93	03-18-93	Scheduled
Preparation Time		466	5	03-23-93	03-29-93	Scheduled
Cannon AFB, NM		227	3	04-01-93	04-05-93	Scheduled
Howard AFB, CZ		225	3	04-08-93	04-12-93	Scheduled
DavisMont AFB,AZ		230	3	04-15-93	04-19-93	Scheduled
Preparation Time		467	5	04-22-93	04-28-93	Scheduled
Nellis AFB, NV		231	3	05-03-93	05-05-93	Scheduled
SAC - Inc II		456	74	05-10-93	08-20-93	Scheduled
PlattsburgAFB,NY		255	3	05-10-93	05-12-93	Scheduled
Wurtsmith AFB,MI		258	3	05-17-93	05-19-93	Scheduled
Preparation Time		468	5	05-24-93	05-28-93	Scheduled
Grissom AFB, IN		257	3	06-03-93	06-07-93	Scheduled
Whiteman AFB, MO		242	3	06-10-93	06-14-93	Scheduled
Eaker AFB, AR		240	3	06-17-93	06-21-93	Scheduled
Preparation Time		469	5	06-24-93	06-30-93	Scheduled
Dyess AFB, TX		243	3	07-05-93	07-07-93	Scheduled
Minot AFB, ND		244	3	07-12-93	07-14-93	Scheduled
FairchildAFB, WA		249	3	07-19-93	07-21-93	Scheduled
Preparation Time		470	5	07-26-93	07-30-93	Scheduled
VandenbergAFB,CA		251	3	08-04-93	08-06-93	Scheduled
Ellsworth AFB,SD		245	3	08-11-93	08-13-93	Scheduled

TABLE C-1, CMOS Installation Schedule, Cont...

Outline
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Project: CMOSTEAM.PJ
Revision: 3

Heading/Task Resource	Task ID	Dur	Schd Start	Schd Finish	Status
Beale AFB, CA	252	3	08-18-93	08-20-93	Scheduled
Preparation Time	471	5	08-25-93	08-31-93	Scheduled
MAC - Inc II	457	32	09-06-93	10-20-93	Scheduled
Pope AFB, NC	263	3	09-06-93	09-08-93	Scheduled
McGuire AFB, NJ	271	3	09-13-93	09-15-93	Scheduled
Preparation Time	472	7	09-20-93	09-28-93	Scheduled
LittleRockAFB,AR	265	3	10-01-93	10-05-93	Scheduled
CharlestonAFB,SC	268	3	10-11-93	10-13-93	Scheduled
McChord AFB, WA	269	3	10-18-93	10-20-93	Scheduled
Team 3	196	891	11-15-90	06-01-94	Scheduled
TAC - Inc I	197	34	11-15-90	01-04-91	Scheduled
Homestead AFB,FL	003	7	11-15-90	11-26-90	Scheduled
England AFB, LA	006	7	11-29-90	12-07-90	Scheduled
MountainHoAFB,ID	010	7	12-12-90	12-20-90	Scheduled
DavisMont AFB,AZ	012	7	12-26-90	01-04-91	Scheduled
SAC - Inc I	198	70	01-09-91	04-18-91	Scheduled
Loring AFB, ME	036	7	01-09-91	01-17-91	Scheduled
Wurtsmith AFB,MI	040	7	01-22-91	01-30-91	Scheduled
Offutt AFB, NE	019	7	02-04-91	02-12-91	Scheduled
Eaker AFB, AR	022	7	02-18-91	02-27-91	Scheduled
FEWarren AFB, WY	029	7	03-04-91	03-12-91	Scheduled
FairchildAFB, WA	031	7	03-15-91	03-25-91	Scheduled
Carswell AFB, TX	020	7	03-28-91	04-05-91	Scheduled
Beale AFB, CA	034	7	04-10-91	04-18-91	Scheduled
MAC - Inc I	203	25	04-23-91	05-28-91	Scheduled
Pope AFB, NC	045	7	04-23-91	05-01-91	Scheduled
CharlestonAFB,SC	050	7	05-06-91	05-14-91	Scheduled
Kirtland AFB, NM	048	7	05-17-91	05-28-91	Scheduled
Demo Bases-IncII	437	207	05-31-91	03-27-92	Scheduled
Dover AFB, DE	441	3	05-31-91	06-04-91	Scheduled
Ramstein AB, GE	445	3	06-10-91	06-12-91	Scheduled
Kadena AB, JA	446	3	06-19-91	06-21-91	Scheduled
Preparation Time	450	112	06-24-91	12-03-91	Scheduled
Langley AFB, VA	439	3	12-04-91	12-06-91	Scheduled
SeymourJ AFB, NC	440	3	12-11-91	12-13-91	Scheduled
Shaw AFB, SC	442	3	12-18-91	12-20-91	Scheduled
Preparation Time	451	30	12-23-91	02-05-92	Scheduled
Eglin AFB, FL	438	3	02-06-92	02-10-92	Scheduled
Preparation Time	452	15	02-11-92	03-03-92	Scheduled
Scott AFB, IL	443	3	03-04-92	03-06-92	Scheduled
WrightPat AFB,OH	444	3	03-11-92	03-13-92	Scheduled

TABLE C-1, CMOS Installation Schedule, Cont...

Outline
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Project: CMOSTEAM.PJ
Revision: 3

Heading/Task Resource	Task ID	Dur	Schd Start	Schd Finish	Status
Sheppard TTC, TX	447	3	03-18-92	03-20-92	Scheduled
Barksdale AFB, LA	448	3	03-25-92	03-27-92	Scheduled
Preparation Time	453	170	03-30-92	11-27-92	Scheduled
ATC - Inc I/II	216	16	11-30-92	12-21-92	Scheduled
Goodfellow AFB, TX	109	7	11-30-92	12-08-92	Scheduled
Lackland AFB, TX	111	7	12-11-92	12-21-92	Scheduled
Preparation Time	217	15	12-24-92	01-15-93	Scheduled
AU - Inc I/II	121	7	01-21-93	01-29-93	Scheduled
Maxwell AFB, AL	122	7	01-21-93	01-29-93	Scheduled
AFLC - Inc I/II	218	7	02-03-93	02-11-93	Scheduled
Kelly AFB, TX	119	7	02-03-93	02-11-93	Scheduled
Preparation Time	454	182	02-12-93	10-29-93	Scheduled
USAFE - Inc II	295	146	11-01-93	06-01-94	Scheduled
Spangdahlem AB, GE	272	3	11-01-93	11-03-93	Scheduled
Hessisch-O AB, GE	273	3	11-08-93	11-10-93	Scheduled
Leipheim AB, GE	274	3	11-16-93	11-18-93	Scheduled
Ahlhorn AB, GE	275	3	11-23-93	11-26-93	Scheduled
Norvenich AB, GE	276	3	12-01-93	12-03-93	Scheduled
Morbach AB, GE	296	3	12-08-93	12-10-93	Scheduled
Bitburg AB, GE	277	3	12-15-93	12-17-93	Scheduled
Preparation Time	473	6	12-22-93	12-30-93	Scheduled
Hahn AB, GE	278	3	01-05-94	01-07-94	Scheduled
Zweibrucken AB, GE	384	3	01-12-94	01-14-94	Scheduled
Sembach AB, GE	378	3	01-20-94	01-24-94	Scheduled
RheinMain (MAC)	388	3	01-27-94	01-31-94	Scheduled
Templehof (MAC)	389	3	02-03-94	02-07-94	Scheduled
RAF Lakenheath, U	289	3	02-10-94	02-14-94	Scheduled
RAF Alconbury, UK	290	3	02-17-94	02-22-94	Scheduled
RAF Kemble, (AFLC	294	3	02-25-94	03-01-94	Scheduled
RAF Fairford, UK	291	3	03-04-94	03-08-94	Scheduled
RAF Chicksands, UK	292	3	03-11-94	03-15-94	Scheduled
RAF Mildenhall, U	293	3	03-18-94	03-22-94	Scheduled
RAF Bentwaters, U	385	3	03-25-94	03-29-94	Scheduled
RAF Up Heyford, U	386	3	04-01-94	04-05-94	Scheduled
RAF Greenham Com U	387	3	04-08-94	04-12-94	Scheduled
Sostesterburg, Ne	279	3	04-15-94	04-19-94	Scheduled
Oslo, No	280	3	04-22-94	04-26-94	Scheduled
San Vito AS, Ita	281	3	04-29-94	05-03-94	Scheduled
Comiso AS, Italy	282	3	05-06-94	05-10-94	Scheduled
Decimomannu AB, It	379	3	05-13-94	05-17-94	Scheduled
Aviano AB, Italy	380	3	05-20-94	05-24-94	Scheduled
Iraklion AS, Cre	284	3	05-27-94	06-01-94	Scheduled

TABLE C-2. GANTT CHART CHOS INSTALLATION SCHEDULE

7 Days Per Symbol Heading/Task Resource	Dur	Schd Start	Schd Finish	Nov 90	Dec 91	Jan 91	Feb	Mar	Apr	May	Jun	Jul
CMOSTEAM.PU	900	11-01-90	06-01-94									
Team 1	744	11-01-90	10-15-93									
TAC - Inc 1	48	11-01-90	01-11-91									
MyrtleBeachAFBSC	7	11-01-90	11-12-90									
MacDill AFB, FL	7	11-01-90	11-28-90									
Bergstrom AFB, TX	7	11-29-90	12-07-90									
Howard AFB, CZ	7	12-12-90	12-20-90									
Preparation Time	3	12-28-90	12-28-90									
Luke AFB, AZ	7	01-03-91	01-11-91									
SAC - Inc 1	79	01-18-91	05-08-91									
PlattburghAFB, NY	7	01-18-91	01-24-91									
KISanyer AFB, MI	7	01-29-91	02-06-91									
Whiteman AFB, MO	7	02-11-91	02-20-91									
Barkedale AFB, LA	7	02-26-91	03-06-91									
Minot AFB, ND	7	03-11-91	03-19-91									
Preparation Time	7	03-22-91	04-01-91									
Castle AFB, CA	7	04-04-91	04-12-91									
Ellsworth AFB, SD	7	04-17-91	04-25-91									
March AFB, CA	7	04-30-91	05-08-91									
MAC - Inc 1	35	05-13-91	07-01-91									
Andrews AFB, MD	7	05-13-91	05-21-91									
Preparation Time	8	05-24-91	06-05-91									
LittleRockAFB, AR	7	06-10-91	06-18-91									
Travis AFB, CA	7	06-21-91	07-01-91									
USAFE - Inc 1	145	07-08-91	02-04-92									
SpangdahlemAB, GE	8	07-08-91	07-17-91									
Hessisch-D AB, GE	8	07-22-91	07-31-91									
Bitburg AB, GE	8	08-05-91	08-14-91									
Hahn AB, GE	8	08-19-91	08-28-91									
ZweibruckenAB, GE	8	09-03-91	09-12-91									
Sembach AB, GE	8	09-17-91	09-26-91									
RAF Alconbury, UK	8	10-01-91	10-11-91									
RAF Kambles, AFLG	8	10-16-91	10-25-91									
RAF Fairford, UK	8	10-30-91	11-11-91									
RAF Up Heyford, U	8	11-14-91	11-26-91									
RAF GreenhamComu	8	11-28-91	12-10-91									
Soesterburg, Ne	8	12-13-91	12-24-91									
Preparation Time	5	12-30-91	01-06-92									
Comiso AS, Italy	8	01-09-92	01-21-92									
USAFE - Inc 1/1	8	01-24-92	02-04-92									
Incirlik AB, Tur	48	02-07-92	04-16-92									
Ankara AB, Turke	8	02-24-92	03-04-92									
Torrejon AB, Spa	8	03-10-92	03-18-92									
Moran AB, Spaln	8	03-24-92	04-02-92									
Zaragoza AB, Spa	8	04-07-92	04-16-92									
Navy - Inc 1/1	51	04-21-92	07-01-92									
Preparation Time	20	04-21-92	05-18-92									
Narvik NAS, VA	7	05-21-92	05-01-92									

TABLE C-2. GANTT Chart CHOS Installation Schedule. Cont....

[illegible]

TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont.....

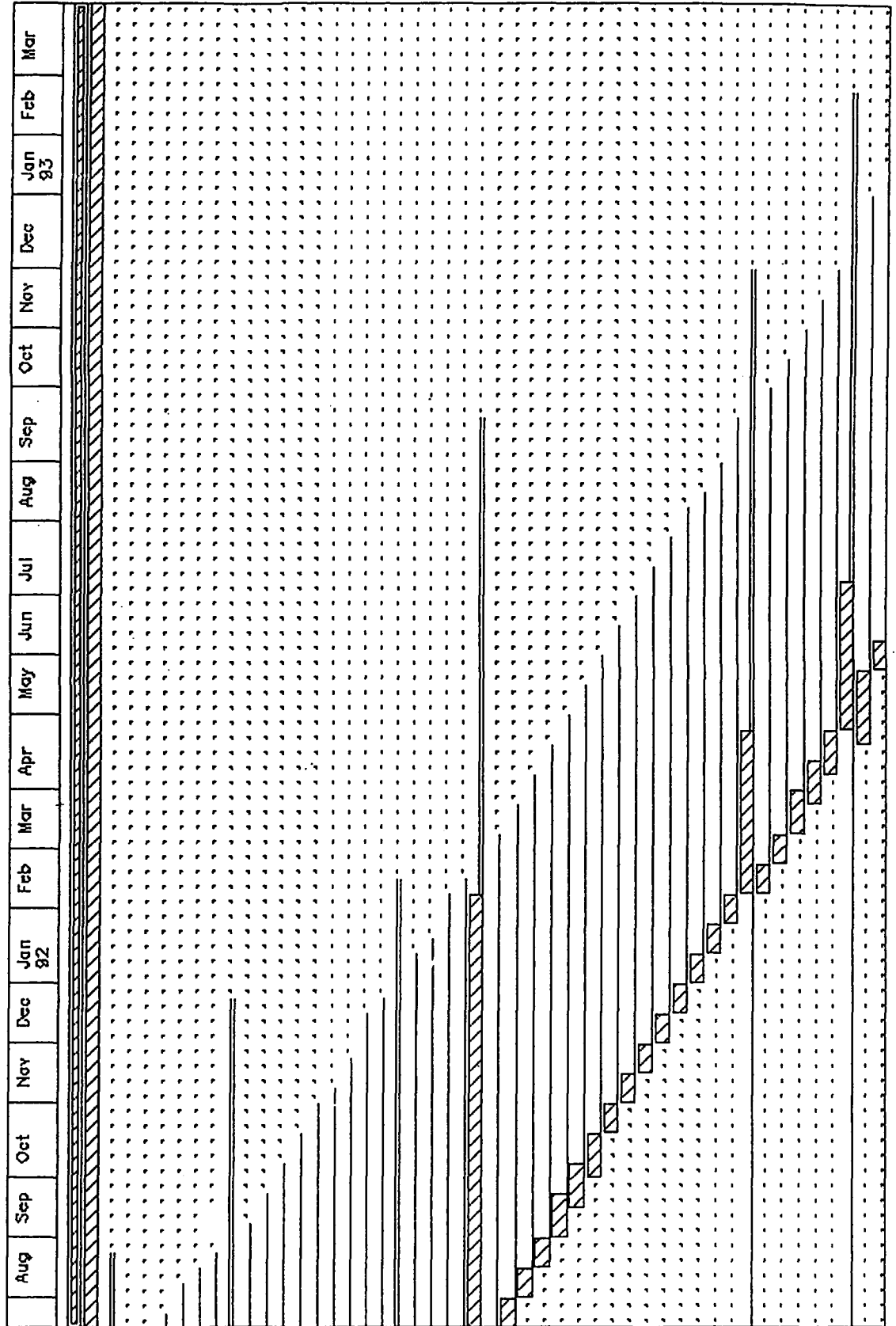


TABLE C-2. GANTT Chart CMOS Installation Schedule, Cont....

7 Days Per Symbol Heading/Task Resource	Dur	Schd Start	Schd Finish	Nov 80	Dec 81	Jan 81	Feb	Mar	Apr	May	Jun	Jul
Cubi Pt NAS, PI	8	06-08-92	06-17-92	..	..	..	..	..	..	..	..	..
Diego Garcia	8	06-22-92	07-01-92	..	..	..	..	..	..	..	..	..
PACAF - Inc I/II	55	07-06-92	09-21-92	..	..	..	..	..	..	..	..	..
Preparation Time		07-06-92	07-10-92	..	..	..	..	..	..	..	..	..
Hickam AFB, HI	5	07-15-92	07-24-92	..	..	..	..	..	..	..	..	..
Andersen AFB, GU	8	07-29-92	08-07-92	..	..	..	..	..	..	..	..	..
Clark AB, PI	8	08-12-92	08-21-92	..	..	..	..	..	..	..	..	..
Yokota AB, JA	8	08-28-92	09-07-92	..	..	..	..	..	..	..	..	..
Mieawa AB, JA	8	09-10-92	09-21-92	..	..	..	..	..	..	..	..	..
AFSC - Inc I/II	25	09-25-92	10-30-92	..	..	..	..	..	..	..	..	..
Hancom AFB, MA	7	09-25-92	10-03-92	..	..	..	..	..	..	..	..	..
Patrick AFB, FL	7	10-09-92	10-19-92	..	..	..	..	..	..	..	..	..
Edwards AFB, CA	7	10-22-92	10-30-92	..	..	..	..	..	..	..	..	..
ATC - Inc I/II	50	11-04-92	01-19-93	..	..	..	..	..	..	..	..	..
Columbus AFB, MS	7	11-04-92	11-12-92	..	..	..	..	..	..	..	..	..
Williams AFB, AZ	7	11-18-92	11-27-92	..	..	..	..	..	..	..	..	..
Yancey AFB, OK	7	12-02-92	12-10-92	..	..	..	..	..	..	..	..	..
Keesler AFB, MS	7	12-15-92	12-23-92	..	..	..	..	..	..	..	..	..
Preparation Time		12-28-92	01-05-93	..	..	..	..	..	..	..	..	..
Lovry AFB, CO	5	01-08-93	01-19-93	..	..	..	..	..	..	..	..	..
Academy - Inc I/II	7	01-22-93	02-01-93	..	..	..	..	..	..	..	..	..
AF Academy, CO	7	01-22-93	02-01-93	..	..	..	..	..	..	..	..	..
AFLC - Inc I/II	16	02-04-93	02-26-93	..	..	..	..	..	..	..	..	..
McClellan AFB, CA	7	02-17-93	02-26-93	..	..	..	..	..	..	..	..	..
Hill AFB, UT	7	03-03-93	03-05-93	..	..	..	..	..	..	..	..	..
TAC - Inc II	47	03-03-93	03-05-93	..	..	..	..	..	..	..	..	..
MyrtleBeachAFBSC	3	03-10-93	03-12-93	..	..	..	..	..	..	..	..	..
Homestead AFB, FL	3	03-10-93	03-12-93	..	..	..	..	..	..	..	..	..
Tyndall AFB, FL	3	03-17-93	03-19-93	..	..	..	..	..	..	..	..	..
Preparation Time		03-24-93	03-30-93	..	..	..	..	..	..	..	..	..
Bergstrom AFB, TX	5	04-02-93	04-08-93	..	..	..	..	..	..	..	..	..
MountainHoAFB, ID	3	04-09-93	04-13-93	..	..	..	..	..	..	..	..	..
Halloman AFB, NM	3	04-18-93	04-20-93	..	..	..	..	..	..	..	..	..
Preparation Time		04-23-93	04-29-93	..	..	..	..	..	..	..	..	..
Luka AFB, AZ	3	05-04-93	05-08-93	..	..	..	..	..	..	..	..	..
SAC - Inc II	B6	05-11-93	09-09-93	..	..	..	..	..	..	..	..	..
Loring AFB, ME	3	05-11-93	05-13-93	..	..	..	..	..	..	..	..	..
Griffiss AFB, NY	3	05-18-93	05-20-93	..	..	..	..	..	..	..	..	..
Preparation Time		05-25-93	06-01-93	..	..	..	..	..	..	..	..	..
KISawyer AFB, MI	3	06-04-93	06-08-93	..	..	..	..	..	..	..	..	..
Offutt AFB, NE	3	06-11-93	06-15-93	..	..	..	..	..	..	..	..	..
McConnell AFB, KS	3	06-18-93	06-22-93	..	..	..	..	..	..	..	..	..
Preparation Time		06-25-93	07-01-93	..	..	..	..	..	..	..	..	..
Barksdale AFB, LA	3	07-06-93	07-08-93	..	..	..	..	..	..	..	..	..
FEWarren AFB, WY	3	07-13-93	07-15-93	..	..	..	..	..	..	..	..	..
MalmstromAFB, MT	3	07-20-93	07-22-93	..	..	..	..	..	..	..	..	..
Preparation Time		07-27-93	08-02-93	..	..	..	..	..	..	..	..	..
Castle AFB, CA	3	08-05-93	08-09-93	..	..	..	..	..	..	..	..	..
Gardswell AFB, TX	3	08-12-93	08-16-93	..	..	..	..	..	..	..	..	..

TABLE C-2, GANTT Chart CMOS Installation Schedule, Cont.....

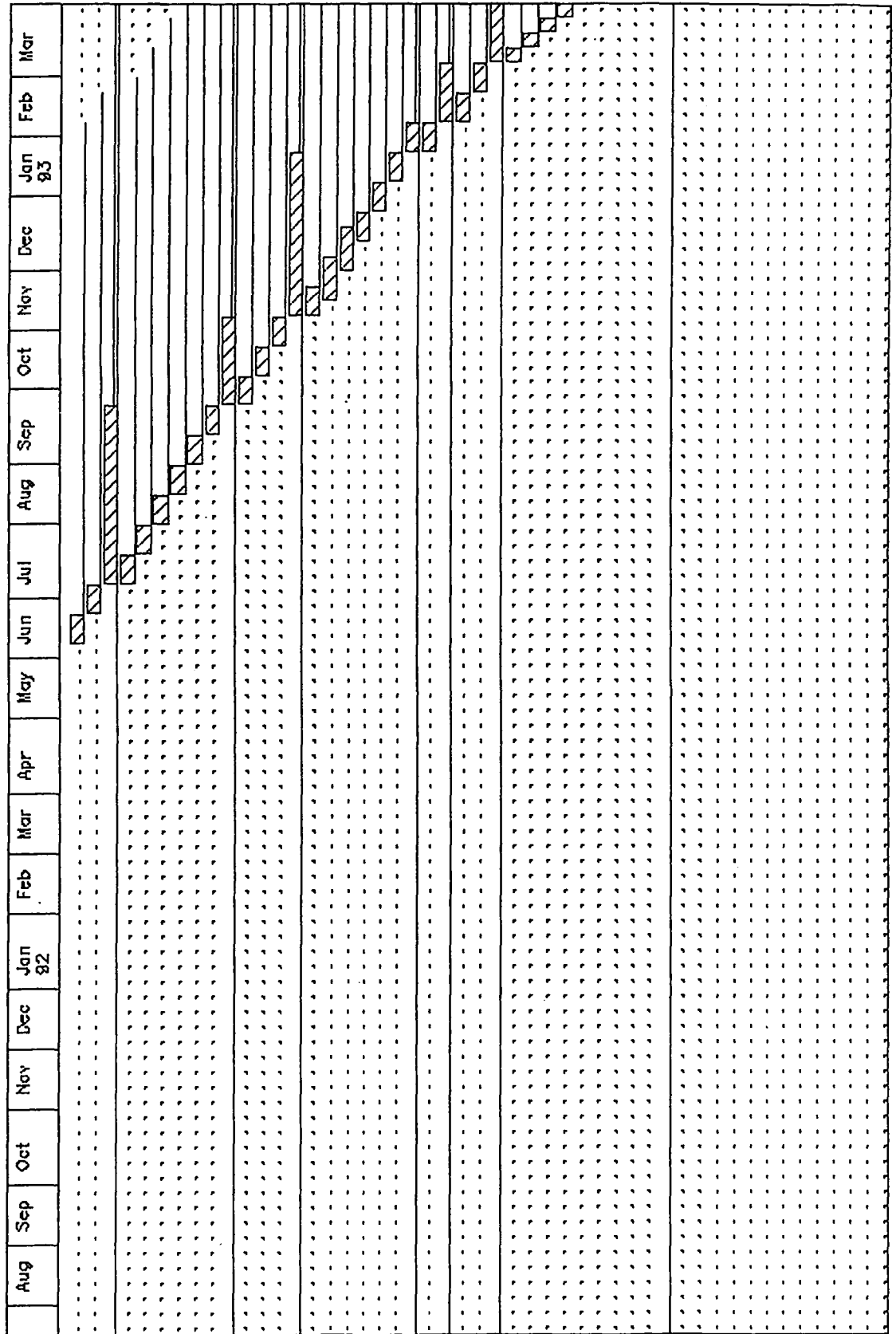


TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont....

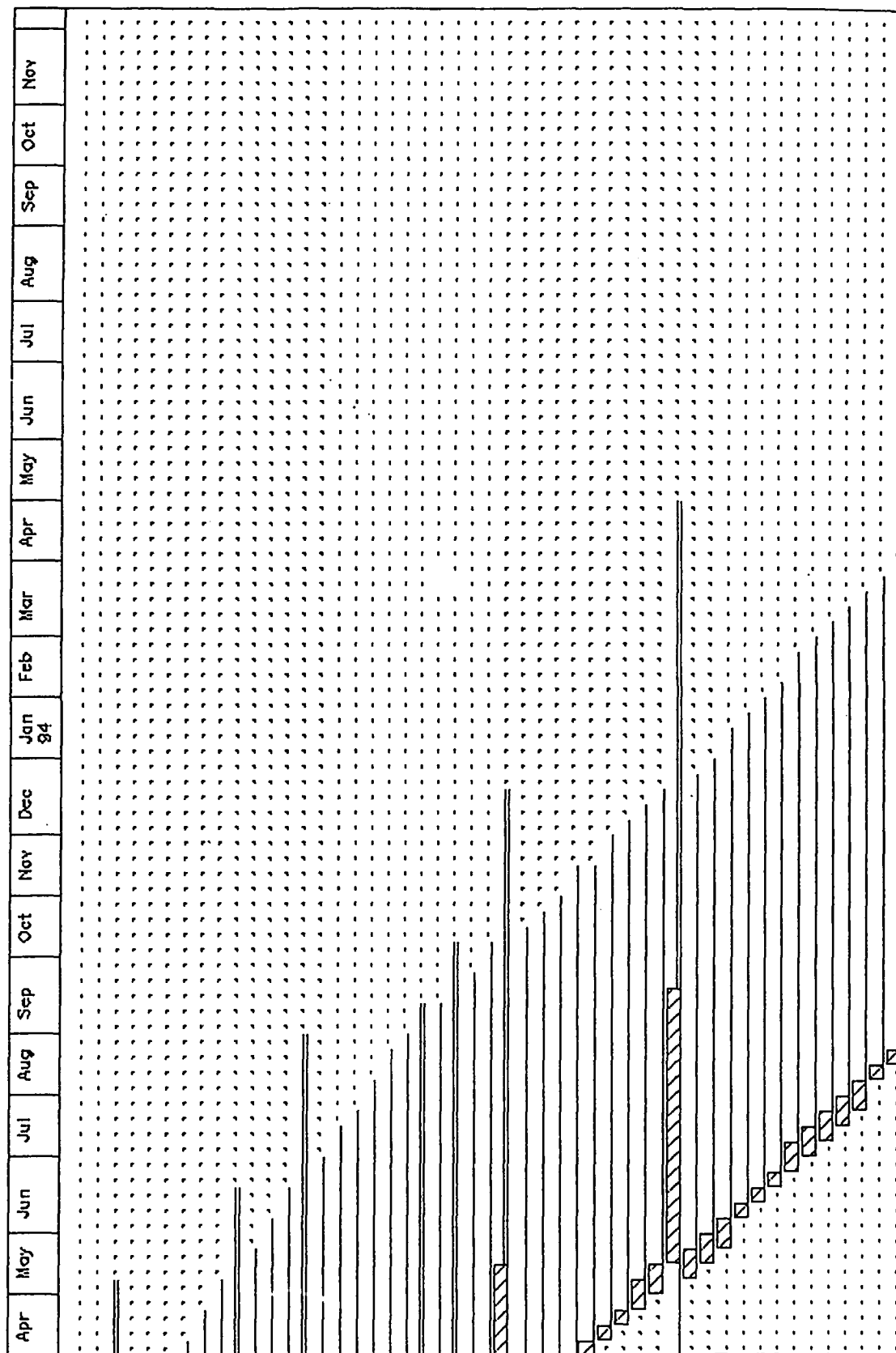


TABLE C-2. GANTT Chart CMOS Installation Schedule, Cont.....

7 Days Per Symbol Heading/Task Resource	Dur	Schd Start	Schd Finish	Nov 80	Dec 81	Jan 81	Feb	Mar	Apr	May	Jun	Jul
GrandForksAFB,ND	3	08-19-93	08-23-93									
Preparation Time	5	08-26-93	09-01-93									
March, AFB, CA	3	09-07-93	09-09-93									
MAC - Inc II	23	09-14-93	10-13-93									
Hurlburt Fld, FL	3	09-14-93	09-23-93									
Andrews AFB, MD	3	09-21-93	09-30-93									
Kirtland AFB, NM	3	09-28-93	10-07-93									
Altus AFB, OK	3	10-05-93	10-13-93									
Trovia AFB, CA	3	10-13-93	10-20-93									
Team 2	747	11-01-90	11-01-90									
TAC - Inc I	48	11-01-90	11-12-90									
Moody AFB, GA	7	11-01-90	11-26-90									
Tyndall AFB, FL	7	11-15-90	12-07-90									
Cannon AFB, NM	7	11-28-90	12-20-90									
Halloman AFB, NM	7	12-12-90	12-28-90									
Preparation Time	3	12-28-90	01-11-91									
Nellis AFB, NV	7	01-03-91	04-25-91									
SAC - Inc I	70	01-16-91	01-24-91									
Griffies AFB, NY	7	01-16-91	02-06-91									
Gribsom AFB, IN	7	01-29-91	02-20-91									
McConnell AFB, KS	7	02-11-91	03-06-91									
Dyess AFB, TX	7	02-26-91	03-19-91									
MalstromAFB, MT	7	03-11-91	04-01-91									
Preparation Time	7	03-22-91	04-12-91									
YandenbergAFB,CA	7	04-04-91	04-25-91									
GrandForksAFB,ND	7	04-17-91	07-01-91									
MAC - Inc I	44	04-30-91	05-08-91									
Hurlburt Fld, FL	7	04-30-91	05-13-91									
McGuire AFB, NJ	7	05-13-91	06-05-91									
Preparation Time	8	05-24-91	06-10-91									
Altus AFB, OK	7	06-10-91	07-01-91									
McChord AFB, WA	7	06-21-91	07-08-91									
USAFE - Inc I	148	07-06-91	07-17-91									
Ahlhorn AB, GE	8	07-08-91	07-31-91									
Leipheim AB, GE	8	07-22-91	08-14-91									
Narvenich AB, GE	8	08-05-91	08-28-91									
Morbach AB, GE	8	08-19-91	09-12-91									
RheinMain (MPC)	8	09-03-91	09-26-91									
Templehof (MAC)	8	09-17-91	10-11-91									
RAF Lakenheath, U	8	10-01-91	10-25-91									
RAF Chicksand, UK	8	10-16-91	11-11-91									
RAF Mildenhall, U	8	10-30-91	11-26-91									
RAF Bentwaters, U	8	11-14-91	12-10-91									
Oalo, No	8	11-29-91	12-26-91									
San Yito, AS, Ita	8	12-16-91	01-07-92									
Preparation Time	5	12-31-91	01-22-92									
DeclimannuAB, It	8	01-10-92	02-05-92									
Ariana AB, Italy	8	01-27-92	04-03-92									
USAFE - Inc I/II	39	02-10-92										

TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont.....

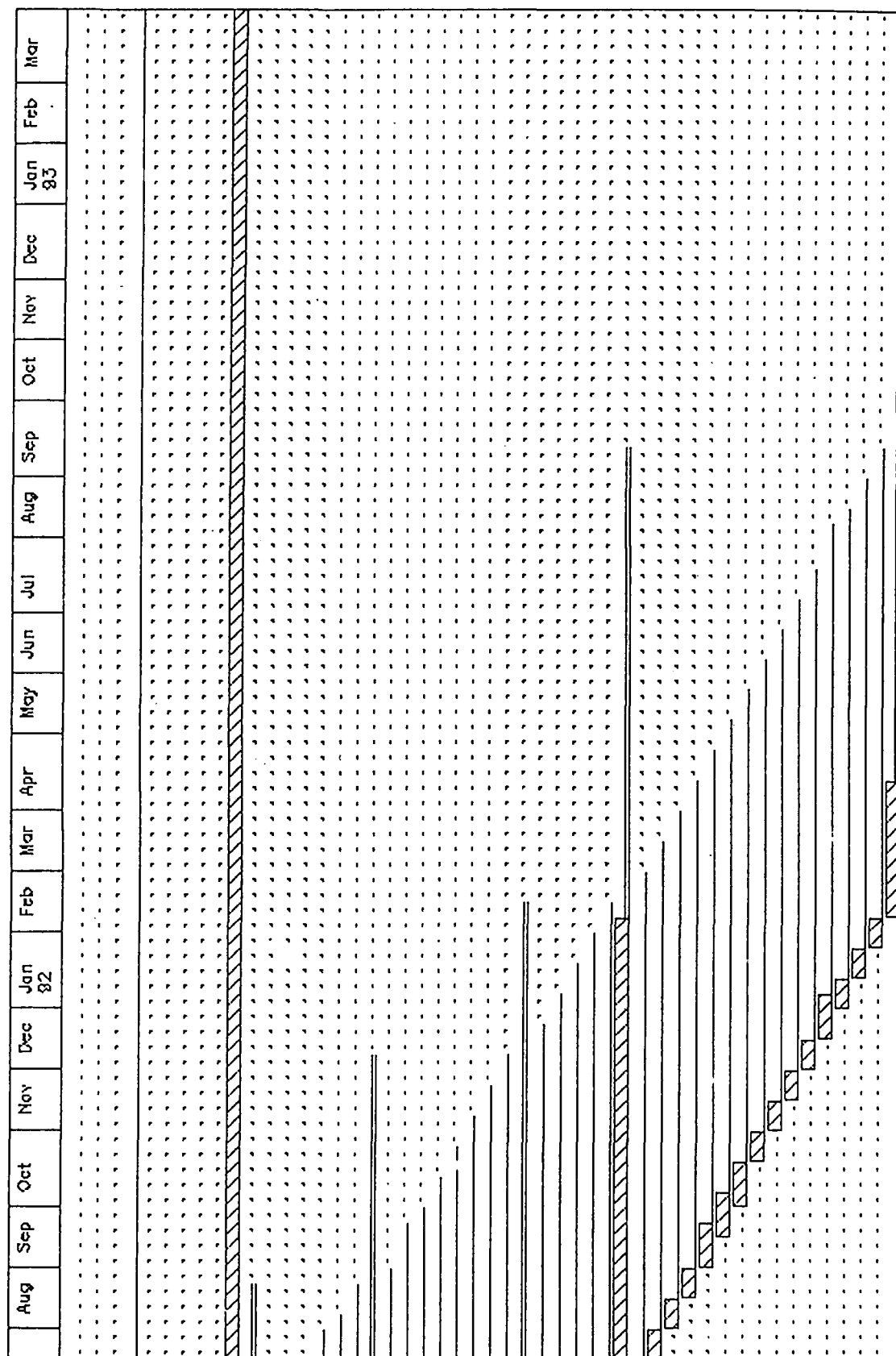


TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont....

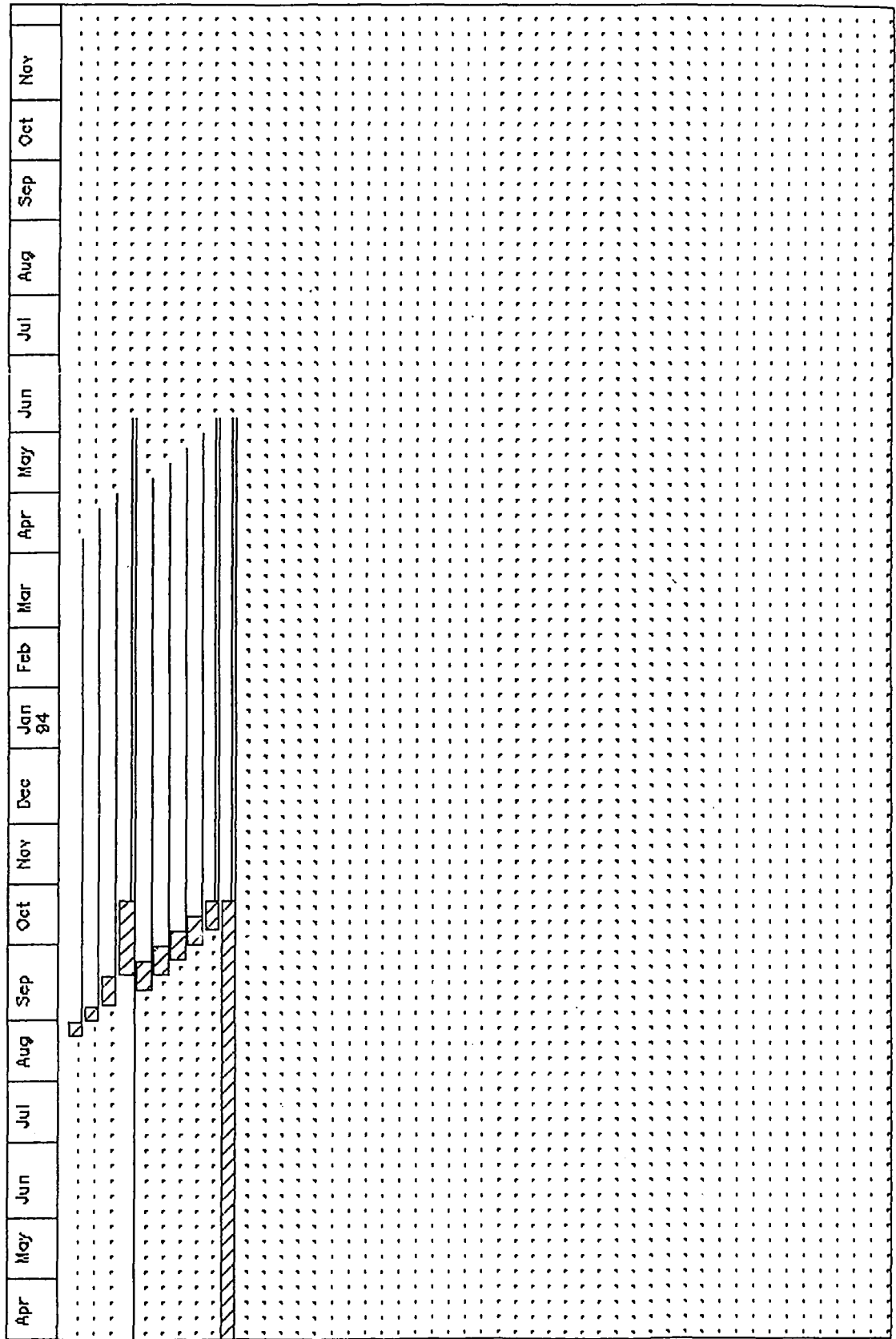


TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont.....

7 Days Per Symbol Heading/Task Resource	Dur	Schd Start	Schd Finish	Nov 90	Dec	Jan 91	Feb	Mar	Apr	May	Jun	Jul
Hellenikon AB, Gr	8	02-10-92	02-19-92									
Pirincik AB, Tu	8	02-25-92	03-05-92									
Izmir AB, Turkey	8	03-10-92	03-19-92									
Lajes Field, Az	8	03-25-92	04-03-92									
AFC - Inc I/II	18	04-10-92	05-05-92									
Elmendorf AFB, A	8	04-10-92	04-21-92									
Eielson AFB, AK	8	04-24-92	05-05-92									
Navy - Inc I/II	28	05-12-92	06-19-92									
Sigonella NAS, SP	8	05-12-92	05-21-92									
Naples NAS, It	8	05-28-92	06-05-92									
Rota, SP	8	06-10-92	06-18-92									
PACAF - Inc I/II	70	06-24-92	09-30-92									
Preparation Time	20	06-24-92	07-21-92									
Osan AB, ROK	8	07-24-92	08-04-92									
Kunsan AB, ROK	8	08-01-92	08-18-92									
Taeju AB, ROK	8	08-21-92	09-01-92									
Kwang-Ju AB, ROK	8	09-07-92	09-16-92									
Suwon AB, ROK	8	09-21-92	09-30-92									
AFSC - Inc I/II	16	10-05-92	10-28-92									
Los Angeles AFS	7	10-05-92	10-15-92									
Brooks AFB, TX	7	10-20-92	10-28-92									
SPACOM - Inc I/II	7	11-02-92	11-10-92									
Peterson AFB, CO	7	11-03-92	11-10-92									
ATC - Inc I/II	42	11-16-92	01-15-93									
Sheppard AFB, TX	7	11-16-92	11-24-92									
Randolph AFB, TX	7	11-30-92	12-08-92									
Reese AFB, TX	7	12-11-92	12-21-92									
Preparation Time	8	12-24-92	01-04-93									
Loughlin AFB, TX	7	01-07-93	01-15-93									
AFLC - Inc I/II	25	01-21-93	02-25-93									
Robins AFB, GA	7	01-21-93	01-29-93									
Tinker AFB, OK	7	02-03-93	02-11-93									
Navark AFB, OH	7	02-18-93	02-25-93									
TAC - Inc II	47	03-02-93	05-05-93									
Moody AFB, GA	7	03-02-93	03-04-93									
MacDill AFB, FL	7	03-08-93	03-11-93									
England AFB, LA	7	03-16-93	03-18-93									
Preparation Time	7	03-23-93	03-28-93									
Cannon AFB, NM	7	04-01-93	04-05-93									
Haward AFB, CZ	7	04-08-93	04-12-93									
Davidson AFB, AZ	7	04-15-93	04-18-93									
Preparation Time	7	04-22-93	04-28-93									
Nellis AFB, NV	7	05-03-93	05-05-93									
SAC - Inc II	74	05-10-93	08-20-93									
Plattsburgh AFB, NY	7	05-10-93	05-12-93									
Wurtsmith AFB, MI	7	05-17-93	05-19-93									
Preparation Time	7	05-24-93	05-28-93									
Griessam AFB, IN	7	06-03-93	06-07-93									
Whiteman AFB, MO	7	06-10-93	06-14-93									

TABLE C-2., GANTT Chart CHOS Installation Schedule, Cont....

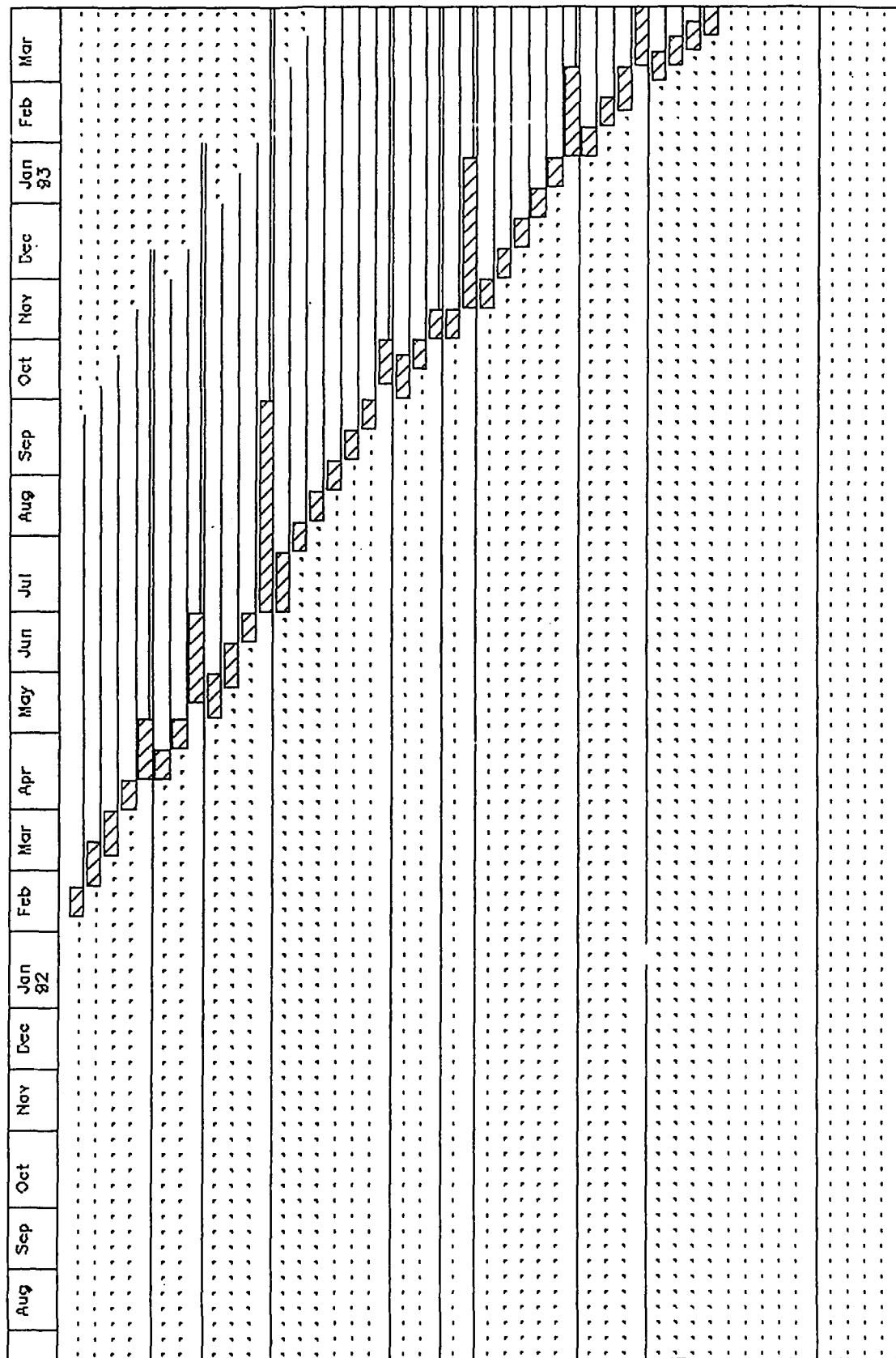


TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont....



TABLE C-2. GANTT Chart CMOS Installation Schedule, Cont....

7 Days Per Symbol Heading/Task Resource	Dur	Schd Start	Schd Finish	Nov 90	Dec 91	Jan 91	Feb	Mar	Apr	May	Jun	Jul
Eaker AFB, AR Preparation Time	5	06-17-93	06-21-93									
Dyess AFB, TX	5	06-24-93	06-30-93									
Minot AFB, ND	5	07-05-93	07-07-93									
Fairchild AFB, WA	5	07-14-93	07-21-93									
Preparation Time	5	07-19-93	07-21-93									
Vandenberg AFB, CA	5	07-28-93	07-30-93									
Ellsworth AFB, SD	5	08-04-93	08-08-93									
Beale AFB, CA	5	08-11-93	08-13-93									
Preparation Time	5	08-18-93	08-25-93									
MAC - Inc II	32	09-08-93	10-20-93									
Pope AFB, NC	3	09-08-93	09-08-93									
McGuire AFB, NJ	3	09-13-93	09-15-93									
Preparation Time	3	09-20-93	09-28-93									
Little Rock AFB, AR	3	10-01-93	10-05-93									
Charleston AFB, SC	3	10-11-93	10-13-93									
McChord AFB, WA	3	10-18-93	10-20-93									
Team 3	391	11-15-90	06-01-94									
TAC - Inc I	34	11-15-90	01-04-91									
Homestead AFB, FL	7	11-15-90	11-26-90									
England AFB, LA	7	11-29-90	12-07-90									
Mountain Home AFB, ID	7	12-12-90	12-20-90									
Davis-Mont AFB, AZ	7	12-26-90	01-04-91									
SAC - Inc I	70	01-09-91	04-18-91									
Loring AFB, ME	7	01-09-91	01-17-91									
Wurtsmith AFB, MI	7	01-22-91	01-30-91									
Offutt AFB, NE	7	02-04-91	02-12-91									
Eaker AFB, AR	7	02-18-91	02-27-91									
FEW Warren AFB, WY	7	03-04-91	03-12-91									
Fairchild AFB, WA	7	03-15-91	03-25-91									
Carwell AFB, TX	7	03-28-91	04-05-91									
Beale AFB, CA	7	04-10-91	04-18-91									
MAC - Inc I	25	04-23-91	05-28-91									
Pope AFB, NC	7	04-23-91	05-01-91									
Charleston AFB, SC	7	05-08-91	05-14-91									
Kirtland AFB, NM	7	05-17-91	05-28-91									
Demo Base - Inc I	207	05-31-91	03-27-92									
Dover AFB, DE	3	06-01-91	06-04-91									
Ramstein AB, GE	3	06-10-91	06-12-91									
Kadena AB, JA	3	06-19-91	06-21-91									
Preparation Time	112	06-24-91	12-03-91									
Langley AFB, VA	5	12-04-91	12-06-91									
Seymour AFB, NC	5	12-11-91	12-15-91									
Shaw AFB, SC	5	12-18-91	12-20-91									
Preparation Time	30	12-23-91	02-05-92									
Eglin AFB, FL	3	02-06-92	02-10-92									
Preparation Time	15	02-11-92	03-03-92									
Scott AFB, IL	3	03-04-92	03-05-92									
Wright Pat AFB, OH	3	03-11-92	03-13-92									

TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont....

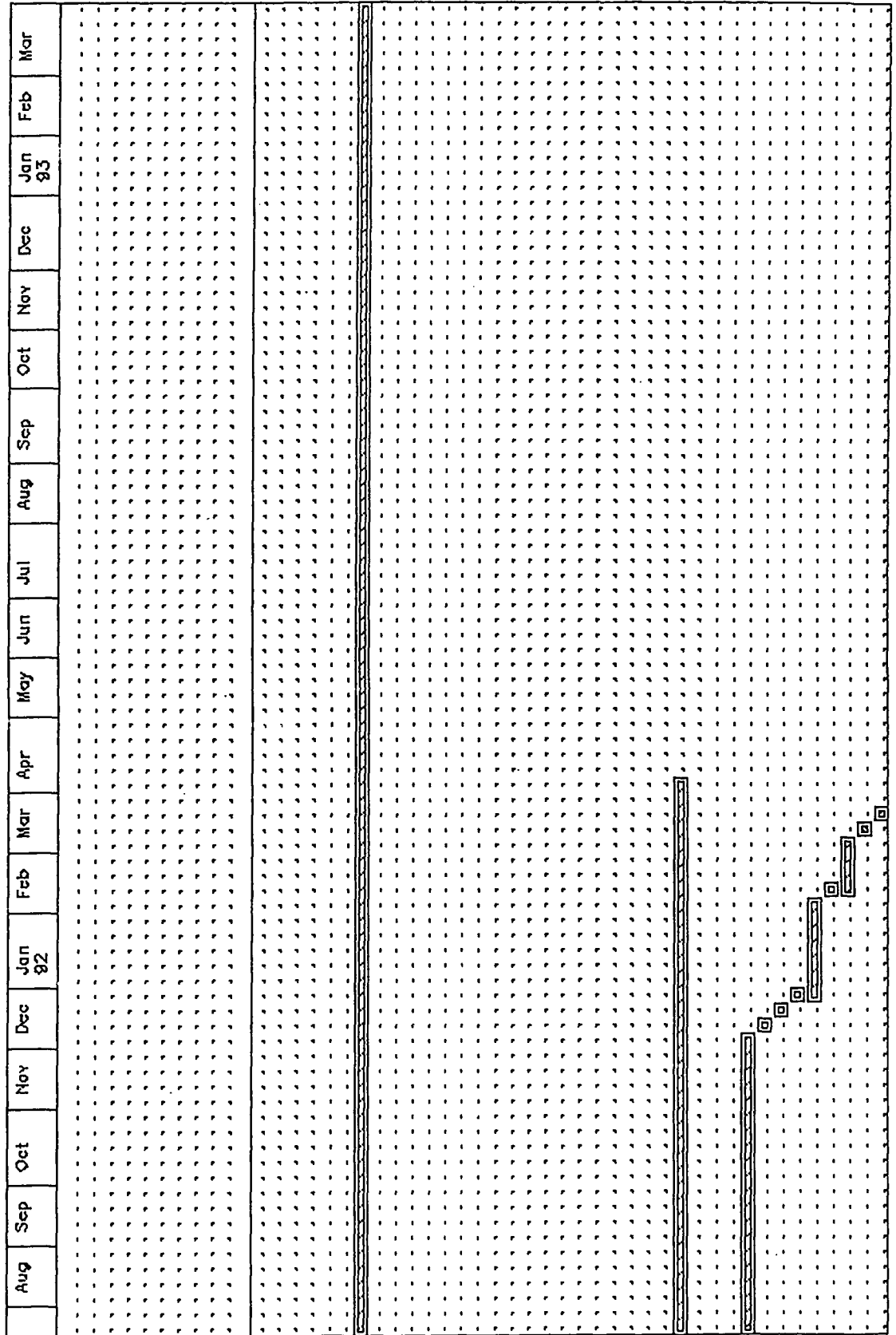


TABLE C-2. Gantt Chart CMOS Installation Schedule, Cont.....

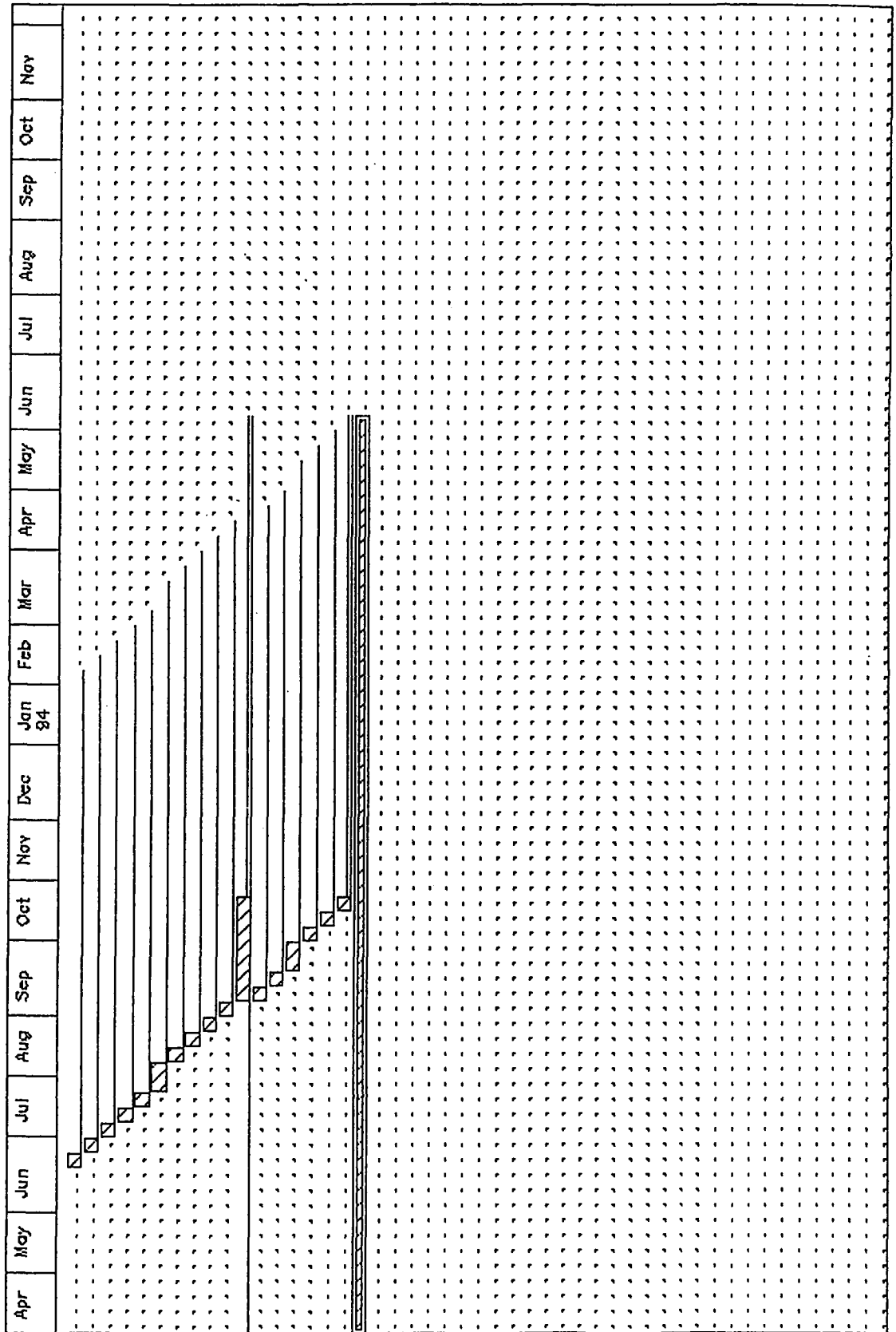


TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont....

7 Days Per Symbol Heading/Task Resource	Dur	Schd Start	Schd Finish	Nov 80	Dec 81	Jan 81	Feb	Mar	Apr	May	Jun	Jul
Sheppard TIC, TX	3	03-18-92	03-20-92									
Barksdale AFB, LA	3	03-25-92	03-27-92									
Preparation Time	170	03-30-92	11-27-92									
ATC - Inc I/II	16	11-30-92	12-21-92									
Goodfellow AFB, TX	7	11-30-92	12-08-92									
Lackland AFB, TX	7	12-11-92	12-21-92									
Preparation Time	15	12-24-92	01-15-93									
AJ - Inc I/II	7	01-21-93	01-29-93									
Maxwell AFB, AL	7	02-03-93	02-11-93									
AFLC - Inc I/II	7	02-03-93	02-11-93									
Kelly AFB, TX	7	02-12-93	02-11-93									
Preparation Time	182	11-01-93	10-28-93									
USAFE - Inc II	148	11-01-93	08-01-94									
Spangdahlem AB, GE	3	11-08-93	11-03-93									
Heeslisch-O AB, GE	3	11-18-93	11-18-93									
Leipheim AB, GE	3	11-23-93	11-26-93									
Ahlhorn AB, GE	3	12-01-93	12-03-93									
Norvenich AB, GE	3	12-08-93	12-10-93									
Morbach AB, GE	3	12-15-93	12-17-93									
Sttburg AB, GE	3	12-22-93	12-30-93									
Preparation Time	6	01-05-94	01-07-94									
Hahn AB, GE	3	01-12-94	01-14-94									
Zweibrücken AB, GE	3	01-20-94	01-24-94									
Sernbach AB, GE	3	01-27-94	01-31-94									
RheinMain (MPC)	3	02-03-94	02-07-94									
Templehof (MPC)	3	02-10-94	02-14-94									
RAF Lakenheath, U	3	02-17-94	02-22-94									
RAF Alconbury, UK	3	02-23-94	03-01-94									
RAF Kemble, AFLC	3	03-04-94	03-08-94									
RAF Fairford, UK	3	03-11-94	03-15-94									
RAF Chicksands, UK	3	03-18-94	03-22-94									
RAF Mildenhall, U	3	03-25-94	03-29-94									
RAF Bentwaters, U	3	04-01-94	04-05-94									
RAF Up Heyford, U	3	04-08-94	04-12-94									
RAF Greenham Common	3	04-15-94	04-19-94									
Soesterberg, Ne	3	04-22-94	04-26-94									
Oalo, No	3	04-28-94	05-03-94									
San Vito AS, Ita	3	05-06-94	05-10-94									
Comiso AS, Italy	3	05-13-94	05-17-94									
Decimomannu AB, It	3	05-20-94	05-24-94									
Aviano AB, Italy	3	05-27-94	06-01-94									
Iraklion AS, Cre	3											

Critical
 Non Critical
 Assigned
 Milestone
 Unassigned
 Float/Delay
 Finish Delay
 Free Float
 Planned
 Actual

TABLE C-2. GANTT Chart CHOS Installation Schedule, Cont....

